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CONTENTS OF VOLUME XVIII.

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INDEX TO VOLUME XVIII.

A	PAGE.	PAGE.
Abdomen, Incised Wound of	296	Aprosexia in Children..... 787
Abortion, Necessity of Preventing.....	335	A REVIEW OF DR. KOCH'S DISCOVERY, WITH SOME REFLECTIONS, BY F. W. PARHAM, M. D. 666
Abortion	793	A REVIEW OF THE TREATMENT OF VARICOCELE, BY G. FRANK LYDSTON, M. D. 821
Abscesses.....	839	Aristol..... 414
Abscess of Brain, Case of.....	381	Aristol, as a Substitute for Iodoform..... 651
Abscess of Cranial Cavity following Middle Ear Disease.....	143	Arsenical Poisoning..... 154
Abscess, Frequent Cause of Death in Children.....	381	ASEPSIS AND ANTISEPSIS, AS PRACTISED IN THE OBSTETRICAL DEPARTMENT OF THE ROYAL HOSPITAL FOR WOMEN, IN DRESDEN, BY HENRY J. SCHERCK, M. D..... 573
ABCESS OF THE LIVER—TWO CASES, WITH REMARKS, BY DR. J. J. BLAND	132	Atmospheric Tractor..... 794
Abuse of Local Gynecological Examinations	34	
Acne, Chrysophanic Acid in	246	B
Acne, Treatment of.....	492, 326	Bacilli Tuberculosis, New Method of Examining for..... 811
ADDRESS OF DR. C. D. OWEN, President of Louisiana State Medical Society	903	Bacilli of Malaria..... 964
A FEW CLINICAL NOTES, BY F. J. MAYER, M. D.	351	Beri-beri; Etiology of..... 776
Air Saturated with Chloroform, in Pulmonary Diseases	566	Bile, Action of..... 965
Albumens, Cornil on Toxic.....	778	Bile, Secretion of in Biliary Fistula..... 875
Albuminoids in Urine, Proportion of Chief.....	242	"Black Eye," to Prevent..... 333
Anæmia, Treatment of, by Infusion	695	BLANC, DR. H. W., on Egyptian Plagues..... 1
Analgesia in Insanity.....	782	BLAND, DR. J. J., on Abscess of the Liver..... 132
Angina Pectoris, Case of, Supposed to be due to Depressed Fracture of Skull.....	379	Bleeding, Artificial..... 212
AN IMPORTED CASE OF FILARIA SANGUINIS HOMINIS (PARASITIC CHYLOCELE) IN NEW ORLEANS, BY RUDOLPH MATAS.....	501	Board of Health for Texas..... 34
Anomalies of Female Sexual Organs	964	BOOK REVIEWS:
ANTHRAX: THE DISEASE OF THE EGYPTIAN PLAGUES. BY HY. WM. BLANC, M. D.	1	A Dictionary of Practical Medicine. By James Kingstone Fowler, M. A., M. D..... 572
Anthrax, Alkaloids of.....	148	A New Medical Dictionary, including all the words and phrases used in medicine, with their proper pronunciation and definitions. By George M. Gould, B. A., M. D. 168
Antipyrine in Cutaneous Affections	492	An Illustrated Encyclopedic Medical Dictionary. By Frank P. Foster..... 734
Antipyrine in Malarial Fever.....	46	Annual of the Universal Medical Sciences. Edited by Chas. E. Sajons, M. D. 329
Antipyrine in Typhoid Fever.....	46	A Text-book on Diseases of the Ear. By Dr. Josef Gruber.....
Antiseptical.....	793	
Antrum of Highmore Fibro-myoma of	207	
Antrum of Highmore, Pyorrhœa of.....	683	
Anus, Point of Selection for making Artificial.....	307	

	PAGE.		PAGE.
Diabetes; its causes, symptoms and treatment. By Charles W. Purdy, M. D.		The Post-graduate Clinical Charts. Arranged by Wm. C. Bailey, M. D., and J. H. Linsley, M. D.	
Diseases of the Digestive Organs in infancy and childhood. By Louis Starr, M. D.		Transactions of the Medical Society of Pennsylvania, 1889-90	733
Essentials of Anatomy, and manual of practical dissection, together with the anatomy of the viscera. By Charles B. Mancrede, M. D.	326	Treatise on Surgery. By T. Holmes, M. A., Cantab.	248
Essentials of Diseases of the Skin, including the Syphilodermata. By Hy. W. Stellwagon, M. D., Ph. D.	169	Boston, Dr. A. P., on Operation for Pterygium.	191
Essentials of Materia Medica, Therapeutics, and Prescription Writing. By Henry Morris, M. D.	327	Branch, Dr. T. S., Branch on Superfœtation.	189
Essentials of Practice of Medicine. By Henry Morris, M. D.	495	Broncho-pneumonia, Erysipelatous.	336
Examination of Water for sanitary and technical purposes. By Henry Leffman, M. D.		Brower, Dr. Dan'l R., on Locomotor Ataxia.	741
Handbook of Diseases of Women. By Dr. F. Winckels.	327	Bruns, Dr. H. D., Letter on "Ignorant Criticism".	149
How to Preserve Health. By Louis Barkan, M. D.	328	Burns, Liniment for.	87
International Atlas of Rare Skin Diseases.			
Plain Talks on Electricity and Batteries, with therapeutic index. By Horatio R. Bigelow.		C	
Principles and Practice of Surgery. By John Amhurst, Jr., M. D.	248	CÆLIOTOMY (ABDOMINAL SECTION), FOR RUPTURE OF THE PARTURIENT UTERUS, BY HENRY C. COE.	915
Prof. Koch's Method to Cure Tuberculosis. By Dr. Max. Birnbaum.		Cæsarean Section.	689, 925
Saunders' Pocket Medical Lexicon. By John M. Keating, M. D.	572	Cæsarean Section as Practised in Germany.	445
Terminologia Medico-Polyglotta. Compiled by Theodore Maxwell, M. D.	251	Cancers, Injections of Bichloride of Mercury in.	790
Text-book of Animal Physiology. By Wesley Mills, M. A., M. D.	249	Castrate the Husband or Ligate the Vas Deferens.	779
Text-book of Hygiene. By George H. Rohe, M. D.	804	Catarrh, Washes and Sprays in Naso-pharyngeal Catarrh.	783
Text-book of Materia Medica for nurses. Compiled by Lavinia L. Dock.		Chancroids, Salicylic Acid in.	653
Text-book of Medical Jurisprudence and Toxicology.	970	Chorea of the Larynx.	788
Text-book of Practical Therapeutics, etc. By Hobart Amory Hase, M. D.	328	Chrysophanic Acid in Acne.	246
The Patient's Record for the use of physicians and nurses.	654	Coagulation of Blood.	949
		Cocaine in Dentistry.	731
		Codein as a Narcotic.	216
		Cold as an Etiological Factor.	147
		Colon, Inflammation About the Head of the.	457
		Continued Fever.	475
		Constipation in Women.	416
		Convulsions.	472
		Copaiba Eruption.	762
		Corpuscles, Increase in Number at Great Altitudes.	814
		CORRESPONDENCE:	
		Dr. C. B. Lanneau.	314
		Dr. C. D. Owen.	765
		Dr. H. D. Bruns.	149
		Dr. John S. Billings.	476
		Dr. R. Matas.	216
		From London.	145, 308
		From Vienna, Austria: 51, 140,	212
		Cremation in Milan.	569
		Cremation the Sole Remedy Against Infection.	569
		Cystitis in Women.	975

D		PAGE.		PAGE.
Dandruff, Treatment of.....	247,	415	Is the Age of Miracles Past?.....	947
Decline of the French.....		974	Koch's Cure for Consumption.....	481
Delivery in Erect Position.....		967	Koch's Treatment—or Dixon's?.....	630
Diabetes.....	47,	846	Leprosy in Louisiana—Neces-	
Diabetes Insipidus, Case of.....		406	sity of Providing for Lepers.....	394
Diabetes, Treatment of.....		400	Mr. Tait's Arraignment of Mr.	
Diphtheria, Bacteriology of.....		146	Lister.....	386
Diphtheria and Croup, Identity of.....		86	On Catgut Infection.....	727
Diphtheria in the Cat.....		146	Our Quarantine Service.....	63
Diphtheria in the Cow.....		147	Passed Assistant Surgeon T. S.	
Diphtheria, Cured by Erysipelas.....		167	Armstrong.....	68
Diphtheria, Discussed by Louis-			Popularizing Medical Knowl-	
iana Board of Health.....	852		edge.....	479
Diphtheria, Improved Treatment			Quinine Eruption.....	313
of.....	767		That Medical Legislation.....	150
Diphtheria, Milk as a Carrier of.....	145		The "Bacteriological World".....	866
Diphtheria, Prolonged Contagion			The Close of the Quarantine	
After.....	570		Season.....	483
Diphtheria Records.....	91, 171, 255,	337	The Contagiousness of Lep-	
	417, 497, 575, 655, 737,	816	rosy.....	75
Diphtheria or Tonsillitis?.....		530	The Gathering of Statistics of	
Diphtheria, Transmission from			the Physically and Mentally	
Animals to Man.....	810		Defective.....	78
Diphtheria, Treatment of, in			The Homœopathic Corn.....	547
America.....	320		The Latest Phase in Tuberculo-	
Dislocations, Kocher on Treat-			sis.....	311
ment of Old.....	219		The Leprosy Question.....	477
Disorders of Sleep.....	403		The New Orleans Training	
Dixon, on Checking Tuberculo-			School for Nurses.....	70
sis.....	642		The Non-Unity of Phthisis.....	234
Drum-membrane, Treatment of			The Rational Treatment of Tet-	
Relaxation of, with Collodion.....	649		anus.....	232
Dust and Tubercle Bacilli.....	777		The Recession of the Influenza.....	634
Dyspepsia, Prescription for Flat-			The Regulation of Medical	
ulent.....	327		Practice in Japan (and in	
			Louisiana).....	157
			The State Medical Society.....	866
			The State Medical Society—	
			Where Shall the Next Meet-	
			ing be Held?.....	722
			The Virchow Testimonial.....	772
			Twelfth Annual Meeting of the	
			State Medical Society.....	944
			Unutilized Resources—Dr. Jos.	
			Jones and the Koch Liquid.....	770
			Virchow's Seventieth Birthday.....	552
			Yellow Fever and Quarantine.....	239
			Edometrium, Chronic Inflamma-	
			tion of.....	297
			Edometrium, Local Treatment.....	843
			Empyema, Surgical Treatment of.....	471
			Epiglottitis, Raising the.....	407
			Epilepsy, Removal of Hand-center	
			in a Case of Focal.....	161
			Epistaxis, Controlling.....	400
			Epistaxis in Liver Trouble.....	194
			Erysipelas, Methods of Treating.....	317
			Eserine in Tetanus.....	291
			Ether-drinking in Ireland.....	897
			Excision of Part of Carpus.....	532
			Extirpation of the Uterus for	
			Cancer.....	941

E

Echinococcus of Liver.....	204
Echinococcus Orbitalis.....	142
Eclampsia, Germ of.....	802
Ectopic Gestation, Indications for	
Operation in.....	459
Ectopic Gestation, Laparotomy in.....	385
EDITORIALS:	
A Case of Arsenical Poisoning.....	154
A Note on Koch's Treatment.....	773
An Improved Method of Treat-	
ing Diphtheria.....	767
Care of Lepers in the United	
States.....	549
Cases Treated by Koch's Meth-	
od at Eye, Ear, Nose and	
Throat Hospital, New Or-	
leans.....	626
Danger in Popular Remedies.....	485
Election of Resident Surgeons	
in the City Eye, Ear, Nose	
and Throat Free Hospital.....	485
Impure and Adulterated Milk	
in Large Cities.....	632

F		PAGE.	IMPROVED DISINFECTING AND FUMIGATING SYSTEM AT THE MISSISSIPPI RIVER QUARANTINE STATION. BY S. R. OLLIPHANT, M. D.		PAGE
False Hair.....		491	Impurities under the Finger Nails.....		399
Female Physicians, First in Austria.....		58	Incontinence of Urine in Children.....		496
Fissure of the Anus, Symptoms and Treatment.....		959	Indigestion, a Cause of Bright Disease.....		525
Foreign Body in Nose for Seven Years.....		45	Indigestion, Peculiar Case of.....		210
Fournier, Prof., on Scabies.....		279	Indigo as an Emmenagogue.....		846
Fracture of Frontal Bone, with Loss of Brain Substance.....		203	Ingrown Toe-Nails.....		397
Fracture of Skull.....		32	Influenza, Accession of.....		634
Freaks, Manufacturing Museum.....		736	Influenza, Affections of Lungs and Pleura in.....		144
Friedrichs, Dr. A. G., on Pyrrhœa of Antrum.....		683	Influenza, Cradle of.....		812
FRIEDRICHS, DR. GEO. J., on Decay of Teeth.....		596	Influenza, Discussion at the Royal Society of Buda-Pesth.....		51
Furuncles, Antiseptic Treatment of.....		652	Influenza, Sequel of.....		211
Furuncles, Treatment of.....		654	Influenza, Rationale of.....		553
G			Insect-bites.....		415
Gall-stones, Formation of.....		318	Intestinal Obstruction, Acute.....		141
Gall-stones, Treatment of.....		319	Intralaryngeal Growths.....		79
Gall-bladder, Surgery of.....		468	Intussusception of Intestine.....		33
GAUTHREAUX, DR. J. J., on Superfœtation.....		421	Ischias Scholiotica.....		140
Glanders, Stamping Out, in Central Louisiana.....		897	J		
Glossalgia, Malarial.....		351	Jenks, William F., Memorial Prize.....		170
Gonorrhœa, Chronic.....		414	K		
H			Keanu Case of, the Leper.....		87
Hair, False.....		491	Koch, Dr. Robert, on Inoculation Method of Treating Tuberculosis.....		555
Hair Tonic.....		160	Koch, Dr. Robert, on Inoculation Method of Treating Tuberculosis.....		640
Hair-wash, Prophylatic.....		415	Koch's Method, Virchow on Injurious Effects of.....		639
Halviva, a Substitute for Quinine.....		745	Koch's Method, Peptonuria after Koch's Remedy in Laryngeal Tuberculosis.....		567
Hawking, Cure for.....		813	Koch's Treatment at Eye, Ear, Nose and Throat Hospital.....		627
Heart-failure Cells.....		168	Koch's Treatment at Eye, Ear, Nose and Throat Hospital.....		702
Hematoma Auris.....		211	Kocher on the Treatment of Old Dislocations of the Shoulder Joint.....		219
Hemorrhage in Uterine Fibroids Controlled by Galvanism.....		205	L		
Hemorrhoids.....		32	Labor, Induction of Premature, in Contracted Pelves.....		859
Hepatic Phlebotomy.....		293	Lanneau, Dr. C. B., on Quinine Eruption.....		315
Hernia, Radical Cure for.....		961	Laparotomies, Elevated Position in.....		486
Hospitals, Use and Abuse of.....		807	Laparotomy versus Electricity in Ectopic Pregnancy.....		383
HOW SHALL WE REDUCE HIGH TEMPERATURE? By Dr. J. W. Moorhead.....		341			
Hydraceticin in Psoriasis.....		57			
Hydrastin, Action on Uterus.....		966			
Hydrastis Versus Phthisis.....		729			
Hydrophobia.....		324			
Hygiene of Children, Dr. Carhart,.....		31			
Hypnotism.....		149			
I					
Ichthyol.....		489			
Identity of Diphtheria and Croup.....		86			
Ill Health in American Girls.....		458			
Immigrant Dermatoses.....		491			
Impotentia Cœundi, treatment of.....		145			

	PAGE.
Laplace, Dr. Ernest.....	160
Larynx, Cancer of.....	869
Larynx, (Edema of, Caused by Iodide of Potassium.....	646
LAWRASON, DR. G. B., on Vascular Neuroses.....	177
Leak, Dr. H. K., on Abuses in Gynæcology.....	34
Lee, Dr. Geo. H., on Eserine in Tetanus.....	291
Leopold, Prof. G., on Laparotomies.....	486
Lepers, Care of, in the United States.....	549
Leprosy, Contagiousness of.....	75
Leprosy, Case of Keanu.....	87
Leprosy, Coexistence of Syphilis and.....	451
Leprosy, Discussion at Imperial Society of Medicine, Constantinople.....	85
Leprosy, Dr. H. W. Blanc on.....	522
Leprosy in Louisiana.....	477
Leprosy in Louisiana.....	394
Leucorrhœa, Injection for.....	413
Liver, Hypertrophic Curhosis of.....	319
LYDSTON, DR. G. FRANK, on Vari- coele.....	84

M

Malarial Glossalgia.....	351
Malaria, Bacilli of.....	964
Maiaira in Galveston.....	40
Malaria, Sunflower in.....	402
Mammary Gland, Adenoma of.....	205
Mammary Gland, Scirrhus of.....	308
MATAS, DR. R., on "Additional Aids ".....	216
MATAS, DR. R., on Filaria Sangu- nis Hominis.....	502
MATAS, DR. R., on Intestinal Anastomosis, etc.....	97
McLAUGHLIN, DR. J. W., on Sal- pingitis.....	261
Medical Legislation.....	150
Medical Legislation in Japan (and in Louisiana).....	157
Medical Legislation in New York.....	159
Medical Practice Acts in Differ- ent States.....	975
Medical Practice Bill, Shreveport Med. Society on.....	60
Meningitis and Peritonitis from Pneumococci Without Pneu- monia.....	241
Meteorological Reports.....	92, 172, 256
338, 418, 498, 576, 656, 738, 817	
898, 978, 982	
METZ, MR. A. L., on Analysis of Miss. River Water.....	664
" Microbe Killer ".....	333

	PAGE.
Middle Ear, Abscess of Cranial	
Cavity following Suppuration of	143
Midwifery, Antisepsis in	62
Migraine	415
MILES, DR. A. B., on Gunshot	
Wound of Abdomen	661
Milk, Impure and Adulterated, in	
Large Cities	632
Milk, Infection from	886
Milk, Putrified, in Breast	969
Miscarriage More Dangerous than	
Labor at Term	334
Moles, Uterine	465
MOORHEAD, DR. S.W., on Reduc-	
ing High Temperature	341
Mortuary Reports	91, 171, 252, 337
	417, 497, 575, 655, 737, 816, 897
	977, 981
Morphœa	761
Myxœdema	437

N

Nasal Intubation.....	409
Naso-pharyngeal Fibromata.....	198
Neuroses, Morbid Reflex.....	467
Neuroses, Vascular.....	176
New York Pasteur Institute.....	554
Nose, Perforating Ulcer of.....	790
Not a Fast, but a Fraud.....	335

O

OBITUARIES:	
Dr. G. B. Underhill	893
Dr. Winthrop.....	332
Dr. J. J. Gauthreaux	405
Dr. Joseph Leidy.....	970
OLLIPHANT, DR. S. R., on Disinfecting Apparatus at Miss. River Quar. Station.....	25
ON ALL SIDES A LEARNED DOCTOR, BY JAMES E. REEVES, M. D	581
Operation for Radical Cure of Scrotal Hernia.....	961
Optic Nerve, Electrotherapy of Atrophy of.....	57
ORTA, GARCIA DE Portuguese Pharmacologist	56
Osteo-Sarcoma, Autopsy.....	302
Osteo-Sarcoma of Orbit	307
Os Uteri, Occlusion	858
Otalgia and its Treatment.....	648
Otitis Media Suppurativa, Treatment of	411
Otitis Media Suppurativa, Cerebral Thrombosis After.....	787
Ovary, Cystic, Case	613
Ovary, Palpation of.....	616
Ovulation and Menstruation.....	840
Oxygen Administered by the Rectum and Subcutaneously.....	780
Ozæna.....	411

S	PAGE.	T	PAGE.
Salines in Peritonitis and Typho- malaria.....	45, 46	Tabes Dorsalis, Initial Symptoms of.....	213
Salol in Dysentery.....	45	Talipes Equinus.....	961
SALPINGITIS, BY J. W. McLAUGH- LIN, M. D.....	261	Tapeworm, Treatment of.....	405
SANITARY ANALYSIS OF MISSIS- SIPPI RIVER WATER, BY A. L. METZ, PH. G.....	664	Tetanus, Treatment of, with Eser- ine.....	291
Scabies, Lectures on, by Prof. Fournier.....	279	Tetany from Unsound Oysters....	378
Scarlatina, Pseudo - Diphtheritic Angina of.....	650	Theobromin, Diuretic Effect of....	143
SCHERCK, DR. HENRY J., on Asep- sis and Antisepsis.....	273	THE SPECIFIC TREATMENT FOR TUBERCULOSIS BY PROF. KOCH'S METHOD, BY KARL VON RUCK, B. S., M. D.....	599
SELECTED ARTICLE:		Thrombosis of Cerebral Sinuses Following Otorrhœa.....	787
Total Extirpation of the Uterus for Cancer.....	941	Tinea Versicolor.....	759
Selected Formulas.....	979	Toe Nail, Novel Treatment of In- grown.....	975
Sexual Organs, Anomalies of Fe- male.....	966	Tongue, Urticaria of.....	565
Shoulder-zone, Extirpation of....	142	Tonsils, Galvano-Puncture in Enlarged.....	967
Shortening Normal Ligaments, Remote Results of.....	749	Tonsil, Primary Chancre of.....	564
Skin, Clinical Lecture on Dis- eases of the.....	759	Tonsillotomy, Bloodless.....	566
SOME OBSERVATIONS ON THE USE OF FUCHSINE IN TREATMENT OF CANCER, BY ISADORE DYER, M. D.....	746	Tracheotomy Tube Retained for One Year.....	33
Spontaneous Burning of Rags, Death from.....	643	Tuberculosis, Discussion at Tenth Internat. Med. Cong.....	372
State Medical Society of Louis- iana.....	722	Tuberculosis, Dixon's Method of Treating.....	642
Stockings, Red.....	885	Tuberculosis, Koch's Inoculation- Method of Treating.....	555
Stone, Removal of, from Female Bladder Through Urethra.....	463	Tuberculosis, Koch's Remedy in Laryngeal.....	567
Strictures of Male Urethra.....	848	Tuberculosis, Koch.....	640
Strictures, Treatment of, by Linear Electrolysis.....	316	Tympanites.....	414
Study of Galvano-Puncture in En- larged Tonsils in Infants.....	963	Typho-malarial Fever.....	450
SUGGESTIONS ON THE PATHOLOGY AND TREATMENT OF LOCO- MOTOR ATAXIA, by Daniel R. Brower, M. D.....	741	Typhoid Fever in Galveston.....	42
Sulphonalas a Hypnotic.....	47	Typhoid Fever, a Typical.....	382
Sunflower in Malaria.....	402	Typhoid Fever.....	474
SUPERFŒTATION, WITH THE HIS- TORY OF A CASE, BY DR. J. J. GAUTHREAUX.....	421	U	
Superfetation.....	189	Ulcers, Chronic.....	200
Syphilide, an Itching.....	763	Ulcers, Resorcin in Laryngeal....	480
SUPRA-PUBIC CYSTOTOMY.....	201	Unusual Relation of Pulse and Temperature in Malarial Fever, 45,	46
Supra-Pubic Cystotomy in En- larged Prostate.....	456	Urethral Fever, Prevention of.....	245
Syphilis.....	415	Urethral Discharges, Contagious- ness of Chronic.....	867
Syphilis, Nerve Cured by Mercury Alone.....	876	Urticaria, Iodide of Potassium in, Urticaria of Tongue.....	886 565
		Use and Abuse of Hospitals.....	807
		V	
		Value of a Trade Mark.....	978
		Vaginismus Treated with the Con- stant Current.....	247
		Varicocele.....	466
		Varicocele.....	821
		VASCULAR NEUROSES, BY DR. GEO. B. LAWRASON.....	176
		Vascular System and Uterus, Ac- tion of Hydrastin upon.....	966

	PAGE.
Virchow's Seventieth Birthday.....	552
Virchow's Testimonials.....	772
Virchow on Koch's Method.....	639
Von Ruck, Dr. Karl, on Koch's Treatment for Tuberculosis.....	599

W

Water Supply to Dwellings.....	529
Wathen, Dr., On Ectopic Preg- nancy.....	383
Weil's Disease.....	53

	PAGE.
West, Prof. H. A., on Malaria and Typhoid in Galveston, Texas	
WHY DO OUR TEETH DECAY SO FAST? BY GEO. J. FRIEDRICHs, M. D., D. D. S.....	596
Wound, Gunshot of Head.....	296
Wounds, Treatment of Gangren- ous.....	461

Y

Yellow Fever and Quarantine.....	236
Yellow Fever in France	978

NEW SERIES.

VOL. XVIII.

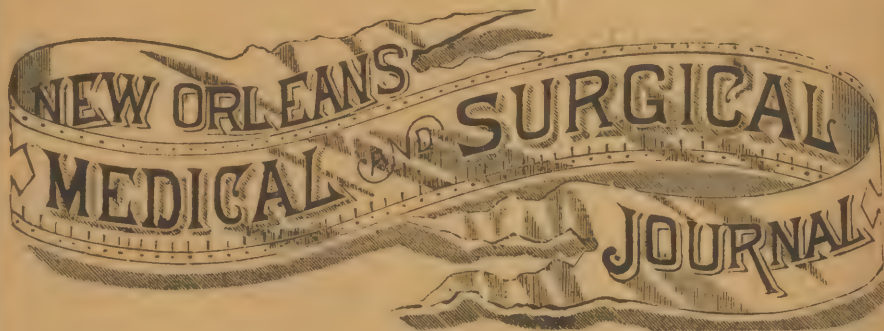
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Celata virtus.—HORACE*

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TABLE OF CONTENTS.

PAGE.	PAGE.
Anthrax: The Disease of the Egyptian Plagues—By Henry William Blanc, M. D.	63
The Improved Disinfecting and Fumigating System at the Mississippi River Quarantine Station—By S. R. Olliphant, M. D.	68
Proceedings of The Texas State Medical Association	70
Scientific Proceedings of the Academy of Medicine and Surgery, Richmond, Va., May, 27, 1890.	75
Vienna Letter	78
Physicians' Mutual Benefit Association.	79
Shreveport Medical Society and Medical Practice Bill	82
Our Quarantine Service	86
Passed Assistant Surgeon S. T. Armstrong.	90
New Orleans Training School for Nurses.	91
The Contagiousness of Leprosy.	92
The Gathering of Statistics of the Physi- cally and Mentally Defective.	93
Surgery	
Medicine.	
Dermatology and Hygiene.	
Medical Items	
Mortuary Report	
Meteorological Summary, May, 1890.	
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ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

ANTHRAX: THE DISEASE OF THE EGYPTIAN PLAGUES.

By HENRY WILLIAM BLANC, M. D.,

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The study of the *disease* of the ten plagues of Egypt is a study of the plagues themselves; so it is necessary that we should in a manner review them all, and at the same time endeavor to become familiar with the conditions surrounding the ancient Egyptians during the time that they were visited by this succession of calamities. These conditions can only be hinted at now and then, when the necessity for clearness justifies, and, as our space is somewhat limited, we will endeavor, after defining our position, to adhere as closely as possible to the subject of this paper. The plagues of Egypt, recorded in the seventh and following chapters of the Book of Exodus, are here discussed only in their physical, or natural, aspects, and are to be regarded as a series of extraordinary natural phenomena, interdependent for the most part, each plague modifying the one succeeding it, until a climax is reached in the tenth and last, when a combination of insanitary conditions is the immediate cause of a general epidemic destructive to man and beast.

The period of the year which we have selected as the

probable beginning of these peculiar phenomena, is the month of July, which corresponds to the inundation, but which precedes by several weeks the time at which the Nile is at its greatest height. The second, third, fourth, and fifth plagues, are made to follow in more or less quick succession during the fall months, when the Nile is receding; while the remaining ones fill out the seasons of winter and early spring, up to the fourteenth day of the month of Nisan, which would be in the month of April, thus giving to the plagues a total duration of about nine of our calendar months.

It is to the so-called plague of boils, the sixth in the regular succession, that the author's attention has been especially directed, but the more carefully this was studied, the more necessary it became to examine into the nature of the plagues that preceded it.

Arriving finally, in this retrospective inquiry, at the initial plague, in which the waters of Egypt are recorded as having been converted into blood, it becomes necessary to account for the manner in which the appearance of such a phenomenon may have occurred in the way of nature. This explanation is all the more important as it is here claimed that there is a certain relationship between the various plagues—a connection strong enough in some cases to be regarded as cause and effect.

In view of these considerations, a large amount of space is here given to the study of the first plague; and in drawing upon data more abundant than the author imagined when this subject was first studied by him, the works of the most eminent naturalists have been consulted, and their words quoted here and there without extensive comment, when the facts in the case as stated by them bear directly upon the subject discussed.

The First Plague.—We read in Exodus (vii. 20, 21), *And all the waters that were in the river were turned to blood. And the fish that was in the river died; and the river stank, and the Egyptians could not drink from the water of the river.*

The question to be determined here is whether the liquid that came down the Nile during a period of some seven days really *was* blood, or some substance which closely resembled it in color and nauseous properties. Assuming that the latter

supposition is probably the correct one, let us go over the field of natural science and turn a few pages of history to see if any similar or kindred conditions have been noted by observers of repute. Inquiring first into the possibility of bodies of water turning red, we find a number of naturalists testifying to this as something entirely beyond dispute; and the chief concern of these observers is not *that* the waters turn red, but *why* they turn red. Ehrenberg* refers to several red colorations of the waters of the Swiss Alps. He noticed upon the damp meadows of the Alps the color of spring-ochre, due to the *gallionella ferruginea*. He has also observed this same infusorium coloring the snow of the Rhone glaciers, mixed with the carmine of the *sphærella nivalis*. This observer found a blood-red pool on the top of the Wengern Alps, the color of which was due to the same infusorium that he had already observed coloring the Platoffski Steppe in Siberia. This infusorium he recognized as the *astasia sanguinea*, which had been familiar to naturalists since 1838. Ehrenberg was not the first to attribute the red color of glacier snow to infusoria, for Vogt† had previously declared this to be his opinion, in a paper read before the Congress of Naturalists in Erlangen, in 1841.

In a later work, giving observations upon the blood-like phenomena, made by himself in Egypt, Arabia, and Siberia, Ehrenberg‡ quotes similar instances noted by such authorities as Linnæus, de Candolle, and de Saussure, who agree with him in ascribing the red color of Alpine snow and water to certain varieties of infusoria. The same authority§ mentions that the banks of the Nile are colored a bright red, more closely resembling cinnabar than blood, in those regions where the *riccia glauca* grows; and he himself noticed, after the overflow of the Nile, near Sint, in Upper Egypt, some standing water colored very red, the coloring body being the *sphæroplea annulina* (Agardh).

As an evidence of the testimony of history with refer-

*Bericht über die . . . Verhandlungen der Königl. Preuss. Akademie der Wissenschaften zu Berlin, 1849.

†Archiv. für Anatomie und Physiologie, 1842, p. ccxv: "Ueber den Rothen Schnee."

‡Annalen der Physik und Chemie; herausgegeben von J. C. Poggendorff. 18. Band. [der ganzen Folge 94 er.] Leipzig, 1830. pp. 477, *et seq.*

§Loc. cit., p. 504.

ence to the so-called " blood phenomena " (*Bluterscheinungen*), a few extracts are here given from the lists of Chladni and Nees von Esenbeck,* who have collected a large amount of data.

I. Rivers run suddenly with red or bloody water, without any previous rain of a similar color:

(a) In the year 323, B. C., at Picenum.

(b) In the year 787, A. D., in Italy.

II. Lakes and standing waters suddenly or gradually become red without previous bloody rains.

(a) Bloody coloration of the Vulsinian Lake, referred to by Livy, 208, B. C.

(b) Similar coloration of a Venetian lake, Sommer, 586, A. D.

(c) Lake near Babylon, which was red for two days during summer. * * * Pliny.

(d) Coloration of the Wan lake, in the year 1110.

III. Meteoric, otherwise usually colorless, substances, (dew, rain, [snow, hail,] and so-called shooting stars,) fall, colored red, from the air as bloody dew, bloody rain, and curdled blood, the atmosphere being unclouded by red dust.

(a) Bloody dew, mentioned in Homer.

(b) Bloody sweat upon the statues of the gods, and on armor. * * * Livy.

The author (Ehrenberg) states that the cause of this " dew " is probably to be traced to insects, and not to atmospheric phenomena.

Swammerdam†, who died in 1685, observed bloody water at Vincennes, in France. He found that it was colored by multitudes of small red water-fleas (*daphnia pulex*), and relates that Professor Schuyl had observed and recognized this same minute organism as the cause of certain bloody phenomena which threw the people of Leyden into great alarm.

It is not at all certain that the Jews themselves considered that the liquid into which the water of the Nile changed was actually blood, for there are other portions of Scripture in which substances which changed color and resembled blood

*Loc. cit., p. 480.

†Loc. cit. p. 486.

were *called blood*, though those who called them so knew that this was not really the case.* Josephus himself tells us that, "The Egyptian river ran with bloody water * * *; for the water was not only of the color of blood, but it brought upon those that ventured to drink it, great pains and bitter torment."

A substance familiar in its color and qualities to every human being who has existed since the beginning of the race, it is most natural that blood should become a common and forcible subject for metaphor.

Its use in this way is familiar to us in botany, zoology, geology, and other sciences where descriptive titles are used; and it is but natural that the prophets, bards, and historians of the East, always so fond of figures of speech, should make use of so familiar a subject.

A case in point is that of the river Adonis (Nahr Ibrahim), so named by the ancients, because its waters exhibited, when in flood, a bright red tinge, the legend being that the color was due to a wound received by this beautiful youth while hunting the wild boar. Hence Milton's lines in *Paradise Lost*:

"Thammuz came next behind,
Whose annual wound to Lebanon allured
The Syrian damsels to lament his fate
In amorous ditties all a summer's day,
While smooth Adonis from his native rock,
Ran purple to the sea, suppos'd with blood,
Of Thammuz yearly wounded."

Thammuz (or Tammuz) has been identified with Adonis. It is curious to note that "Tammuz" is the Hebrew and Syriac name for the month of July, during which the first plague is supposed to have occurred. It was in the month of Tammuz that the "Syrian damsels" bewailed periodically the death of Adonis, continuing their "amorous ditties" just seven days, the exact duration of the discoloration of the Nile in the first plague.

So much, then, for the historical, scientific, and traditional evidence bearing upon the question of waters becoming red or blood-like.

Let us now examine more closely, and attempt to discover

*II. Kings, iii. 22, 23, and Joel, ii. 31.

if Egyptologists have recorded any data beyond that already quoted referring to changes in the Nile itself.

In the work of Abd-Allatif, translated into French by Silvestre de Sacy,* is a clear description of the way that the Nile acquires a green color as it begins to rise, which color is due to the overflow of swampy land by excessive rainfall, the waters bearing away with them a mass of decaying vegetation.† We are told at the same time that the fetid odor of the stagnant swamp water is imparted, in turn, to the river, which carries down with its flood a large amount of soil, and a great quantity of small worms which are found close to the banks. These statements are confirmed by R. Pocoke,‡ Maillet,§ and Vausleb.||

Let us translate a few pertinent paragraphs from notes to the work of Abd-Allatif, already referred to.

“At the periodical return of the rainy season¶ of these countries, numerous torrents are precipitated into the reservoirs of stagnant water: then the corrupted waters of these marshes pass from them and flow into Egypt. Following this come the new waters which produce the rise of the Nile in Egypt; these are *reddish*, because of the mud which has been floated down by the mountain streams * * * .”

“**The change of color of the waters of the Nile may be due, as Pocoke and Maillet conjecture, to particles of an earthy substance stirred up by accidental causes. It may be due, also, to a *byssus* similar to what we call (in Sweden) *wattn-blomning* (*i. e.* water-flower), or to a *conferva*. Indeed, this appearance is, perhaps, produced by a multitude of insects, such as our *monoculus pulex* (Fauna sulcica, No. 2047), which colors the surface of the water.”

Further on in the work of Abd-Allatif (p. 346), we have the following interesting quotation from Antes:

“Some writers have asserted * * * that the waters of the Nile, immediately before the beginning of the rise, are *green*, and when this river has attained its greatest height, they

*Rélation de l’Egypte, Paris, 1810, p. 337.

†Loc. cit., p. 337, “* * * * ces corpuscules végétaux que le fleuve entraine avec lui, sont des fragments de plantes qui se sont formées dans le lac * * * .”

‡A Description of the East, vol. 1, p. 199.

§Description de l’Egypte, tome 1, p. 71.

||Nouv. Relat. de l’Egypte, p. 48.

¶Makrizi, loc. cit., p. 345.

**Oedmann, loc. cit.

are red * * *. I have never perceived any of these colors. It is true, nevertheless, that when this river is at the highest stage of its rise the inhabitants of the country call its water * * * red water.”

Recent observers are quite as emphatic as those already quoted. For instance, Ewald remarks: “The Nile often changes its color, and becomes green or red, and then the water, generally clear and salubrious, becomes offensive and unwholesome.”*

A still more recent authority† makes this emphatic assertion: “* * * red coloring ordinarily appears in the river at the commencement of its increase.” And again:

“Such a change of color in the Nile was by no means uncommon, or Pharaoh would scarcely have quite hardened his heart against the miracle. In ordinary times this appearance of the river arises partly from the red earth, which the swollen waters carry with them, and partly from the presence of small cryptogamic plants and animalcules (infusoria).”

We see, then, from the evidence brought forward that bodies of water in different portions of the globe, and at different periods of history, have been noticed to turn red for days at a time: that the Nile frequently changes color, the green appearance of the water, observed when it begins to rise, changing at times to a red, or reddish hue; that this color is probably due to red soil brought down by mountain torrents, and to infusoria washed out by the torrents in overflowing extensive swampy wastes near the sources of the Nile; that infusoria capable of coloring the water have been observed by naturalists in the marshes about the river, and on its borders, these infusoria being the same as those which have colored large bodies of water elsewhere.

The insalubrity of the waters where the river is at its height has already been touched upon, and to this day the people are in the habit of providing themselves with clear water before the expected pollution of the stream.‡

*History of Israel, vol. ii, p. 62; foot note.

†The Bible History from the Creation to the Exodus, by Alfred Edersheim, M. A., (Oxon.) D. D., Ph. D., London, 1887.

‡“C’est aux marais de No qu’il faut attribuer l’origine de les ‘eaux vertes’ que l’on observe au Caire dans la première décade de juin et quelquefois plus longtemps, pendant vingt ou trente jours; l’eau du fleuve, remplie de cellules végétales, prend alors un goût marécageux et devient insalubre: les riverains n’en boivent point et se contentent de l’eau dont ils ont fait provision avant la période des troubles. Les premières crues des courants d’Ethiopie noient tous les débris ou les rejettent dans les canaux, rendant ainsi à l’eau du Nil ses qualités si vantées.”—*Nouvelle Géographie Universelle par Elisée Reclus, vol. X. 70. Paris 1885.*

What has been said hitherto has applied chiefly to the changes which appeared in the *river* of Egypt rather than in the “vessels of wood,” and “vessels of stone,” and “ponds,” and “pools of water,” referred to in Exodus, vii. 19. Those who insist upon accounting for the “bloody” changes in the “vessels of wood,” etc., are referred to the works of Ehrenberg, already quoted, which give ample proof of the possibility of other water. *away* from the river, also becoming red and polluted. It is even possible, in the light of these scientific observations, that the *outside of these vessels may have had* “bloody” spots upon them.* But however this may be, the main feature of the first plague was the conversion of the *water of the Nile* into blood, or a bloody substance; other changes were of minor importance and might have been produced in a variety of ways. This seems to be also the view taken by the late Dr. Palfrey,† Professor of Biblical Literature in the University of Cambridge, who, in discussing the Scriptures bearing upon this subject, remarks: “Again, it is said, that ‘there was blood throughout all the land of Egypt’ (vii. 21). The expression seems comprehensive; and yet, that the historian did not mean to say that the inhabitants of the kingdom were wholly deprived of access to pure water, is manifest from his own words which follow, where he says, that ‘all the Egyptians digged round about the river for water to drink’ (vii. 24).

“That by the phrase, ‘the waters of Egypt,’ is meant nothing more extensive than ‘the waters of the Nile,’ which irrigated the central portion of that country, not only seems highly probable in itself, but I think its probability is heightened by some important considerations. Aaron is commanded, ‘Take thy rod and stretch out thine hand upon the waters of Egypt, upon *their* streams, [that is the streams of the waters of Egypt—the streams into which waters of Egypt, whatever they were, spread,] upon their rivers, upon their ponds, and upon all their pools of water’ (vii. 19). But when we are told what he actually did, in the following verse, the statement is as follows: ‘He lifted up the rod, and smote the waters that were in *the river*, in the sight of Pharaoh, and in the sight of his servants,

* In 1821 and 1823, Ehrenberg found at Cahira, in Egypt, red spots on the floor, which were “not blood, but a fungus.” Loc. cit. p. 503.

† Academical Lectures on the Jewish Scriptures and Antiquities. By John Gorham Palfrey, D.D., vol. i, p. 124.

and all the waters that were in the river were turned into blood, and the fish that was in the river died, and the Egyptians could not drink of the river;’ and thus it was because the Nile was corrupted, and not because the waters of every part of the kingdom shared the taint, that it is said ‘there was blood throughout all the land of Egypt.’” In a valuable foot note the same writer says: “This view is strongly corroborated by the remark, (verse 24,) that ‘all the Egyptians digged round about the river for water to drink,’ for certainly not all the Egyptians lived on the banks of the river Nile. Many lived in the interior, upon the oases, and elsewhere; and if all who dug for water dug by the bank of that river, it seems to follow that no water except that of the river had been rendered unfit for use.*

Returning to the first plague, as described in the seventh chapter of Exodus, and making deductions from the foregoing data, we conclude:—

1. That at the time referred to the water of the Nile turned unusually red, the color being of a deeper hue than that which the Egyptians were accustomed to note when the river was at its height, the said color being due to an excess of red silt in the river (oxide of iron), or, to infusoria swept down by precipitous streams from marshes near the source, or to both of these causes combined.

2. That the stream was polluted by decaying vegetation washed out from pools, gullies, and marshes, and the like of which is noticed to this day, at a certain time of the year, by those who live on the banks of the Nile.†

3. The unusual muddiness of the stream, together with an excess of decaying vegetation, are sufficient to account for the

*It should be remembered that the ancient Nile had more branches than it has now. Under the Roman dominion eleven branches were counted, and Herodotus speaks of seven.

†The pollution of streams of running water, from one cause or another, is not an uncommon occurrence. As a matter of actual history the following facts may be cited: About December 5, 1889, the water of Bayou Boeuf, a river of medium size in central Louisiana, began to change color, from a muddy red to a blackish hue, which color lasted three weeks. At the same time the bayou took on a peculiar and offensive odor, and fish of every description died in large quantity, and were washed ashore. Dr. W. D. Haas and Dr. Ralph Kilpatrick, who live upon the bayou, have kindly supplied me with these facts and inquired into their cause. This latter turns out to be the giving-way of a dam attached to a sugar refinery, situated on the banks of the stream, this dam having sustained the pent-up, and decaying organic and mineral refuse of the refinery.

It is impossible to say whether the destruction of the fish was due to organic or inorganic causes; certainly the foul odor was that of vegetable decomposition. Both of these gentlemen agree in stating that the amphibia, such as frogs, turtles, snakes, etc., were unaffected by the changes that killed the fish. The water was not potable; horses refused to drink it.

death of the fish, depriving the water of its normal amount of oxygen, and, perhaps, acting directly as a poison. Doubtless many of the fish were killed far up the river, possibly up in the White Nile, which is famous for its fish. Other fish, only partially suffocated, may have died only after meeting the denser waters of the Blue Nile, and have thus been washed past the cities of Lower Egypt.

The Second Plague.—Frogs have always been abundant in Egypt. In the hieroglyphics of the monuments the frog signifies “very many,” or “millions,” doubtless because of its great abundance.

We are told in Exodus (viii. 6), that *Aaron stretched out his hand over the waters of Egypt; and the frogs came up, and covered the land of Egypt.*

It is reasonable to infer that this plague appeared some time during the three months following the discoloration of the Nile; and as the red mud only comes down when the river is near or at its greatest height, and as frogs are most abundant in summer and autumn, the second plague must have taken place between August and October.

Having urged, in the discussion of the first plague, that one of the conditions producing the change of color in the river was the presence of an unusual amount of red mud, we must conclude that this state of things was preceded by an excessive downpour of rain in the Abyssinian mountains and other sources of the Nile—a conclusion based upon common experience with this water course. As a necessary result the river must have risen very high, and perhaps higher than was customary.

Let us pause here a moment and consider what were the conditions associated with the annual and customary overflow of the Nile, and what would be its natural consequences. Only those who have seen the mighty “crevasses” of the Mississippi can appreciate the situation that was presented when the river of Egypt was at its highest point, a vast, rolling stream, extending in nearly every direction as far as the eye could reach. Gardens and fields, canals and lakes, highways from farm to farm—all obliterated beneath the surging waters, while the cities and monuments stand out, like great piers,

above the waves that wash their very foundations; and so, for the time being, all that occurred “throughout the land of Egypt” must have occurred in these wave-washed towns and settlements. Pharaoh did not have to walk far to reach the river. Mohammed needed not to go to the mountain—the mountain had come to him, for the Nile was at his feet. So we read that the monarch was in the habit of going “out unto the water.”

Finally, the inundation is at its height, the waters are at a stand-still for a few days and then begin to recede, leaving pools, hollows, and depressions of all sorts, more or less distant from the receding current. What better opportunity for frogs, gnats, and mosquitoes, to generate in great quantity?

The batrachians have easily escaped the pollution of the stream that destroyed its more delicate denizens,* and now begin to breed in these open pools and fields, until the land is overrun with them. The land, however, is not as extensive as it will be in a month hence, and so the young croakers find their way all the more easily into the bedchambers, ovens, and kneading-troughs of the people.

It is not pretended here that this was an ordinary occurrence, for the frogs must have been excessive, as they died in great numbers and were heaped together in piles. But epidemics of frogs are not unknown, and it is a familiar fact that, if allowed to multiply under favorable conditions, the frog is capable of increasing to countless numbers in an exceedingly short space of time. Eustathius refers to other plagues† of frogs closely resembling the one here considered, which occurred at Paeonia and Dardania. It is said that the sudden appearance of the batrachians in great numbers caused the inhabitants of these places to abandon the country.

The Third Plague.—Much has been written with reference to the meaning of the Hebrew word *chinnim*, as used in the authorized version, and there translated *lice*, and the Greek word *sciniphes*, as used in the Septuagint, and commonly understood to mean either a gnat or a mosquito.

Suffice it to say that, as the exact meaning of the Hebrew

*Drs. Kilpatrick and Haas inform me that during the poisoning of Bayou Bœuf, the frogs and turtles escaped without injury.

†See Bochart's *Hieroz.*, iii. 575.

word is not clearly understood, the author prefers to accept the light thrown upon it by the LXX., and, in such good company as Philo, Jerome, and Origen, to look upon the plague-producing insect as a gnat, or a mosquito.

These two insects abound in Egypt. They have long been an insufferable nuisance frequently commented upon by travelers; they are exactly the kind of pest that the swampy, damp meadows left by the falling water, would be likely to bring forth in large quantity.

This does not seem to have been a particularly serious plague; the mosquitoes and gnats caused annoyance and discomfort, producing welts upon the skin, exciting scratching and considerable irritation. These little pests may have originated in the marshy regions immediately about the cities of Lower Egypt, where the king is supposed to have been domiciled at the time, or they may have been blown by a south wind from the swamps and submerged regions nearer the sources of the Nile. Doubtless considerable cutaneous irritation was produced, amounting to sores in those who were most exposed to them, or who were debilitated by drinking the polluted water of the river.

The Fourth Plague.—The record of this plague is as follows: *There came a grievous swarm of flies into the house of Pharaoh, and into his servants' houses, and into all the land of Egypt: the land was corrupted by reason of the swarm of flies* (Ex., viii. 24).

The Hebrew word of the text is *ārōb*, and is variously translated, *omne genus muscarum*, swarms of flies, mixture of noisome beasts, etc. The idea of the cause of this plague being *beasts* seems to receive its chief justification in the fact that the "land was corrupted" (or destroyed) by reason of them. But even those who have accepted this translation seem to do so with a certain amount of hesitancy, for Josephus himself is at a loss to name the sort of animal which constituted this plague, and the explanation given in the Talmud is nothing less than puerile. The main idea of the translators of the A. V. seems to have been that the plague consisted of a "swarm," and that this "swarm" was one of flies seems to be warranted by many ancient texts and the opinions of a large majority of commentators.

We know that the fly is very abundant in Egypt, and at times constitutes a very troublesome pest. "Both man and beast are cruelly tormented with them," says Sonnini.* "Their perseverance wearies out the most patient spirit." This reference is to the ordinary house-fly; but there are other members of the order *diptera*, which are likewise found in Egypt, though in less abundance.

The gad-fly, for instance, is quite common in the cattle districts of Egypt; and it is said that in Europe alone there are forty varieties of this insect. The gad fly is a great source of worryment to man and beast, and deposits its ova in the sores of all varieties of cattle as well as in their natural openings, and even on the surface of the healthy skin. These ova finally fall to the ground and incubate literally "in the dust of the land."

It is not unlikely, then, that in a country which abounded in such insects—the house-fly, the gad-fly, and other members of the same order—that they should have appeared at this time. For what were the conditions? We are told that they (the Egyptians), gathered the dead frogs together upon heaps, and the land stank (Ex., viii. 14). Here was a rare opportunity for the generation and rapid increase of insect life. Every condition is supplied, and it is impossible to conceive of anything more likely to produce swarms of pestilential flies than heaps of decomposing animal matter piled at intervals over a large surface of territory.

Considering the fly as an etiological factor of the two following plagues—the murrain and the plague of boils—it will not be difficult to understand the relatively greater importance given to this plague over the one immediately preceding it, though under ordinary circumstances it would naturally be supposed that gnats and mosquitoes are capable of giving as much discomfort as flies could be expected to do.

Indeed, "the land was corrupted by reason of the *flies*!"

The Fifth Plague.—Following the plague of flies came the murrain, a disease of the lower animals, which attacked cattle in the field, horses, asses, oxen, and sheep,† producing great mortality. The murrain has long been known in Egypt,

*Trav. iii. p. 199.

†Ex., ix. iii.

and its fatal results noted by travelers.* It usually becomes troublesome in the latter portion of the year, at the time that the inundation is passing away, and lasts, not infrequently, until the following spring.†

Several forms of epidemic cattle disease have been styled "the murrain," but the one which is well known in Egypt at this day, and whose peculiar characters most closely explain the fifth plague of Egypt, as recorded in the book of Exodus, is the disease known familiarly to veterinarians under the various names of Anthrax, Charbon, and Malignant Pustule.

The possibility of the identity of anthrax and the "murrain" of the Egyptian plagues, has not escaped others who have studied this disease;‡ and when we consider the enzootic and epizootic nature of anthrax, its tendency to attack grazing cattle, its marked communicability from beast to man, as well as from beast to beast, by means of insects and other sources of inoculation, the similarity is all the more striking.

Dr. Billings says:§ "Every animal diseased with anthrax, or its cadaver, or any portion of the same, must be looked upon as a dangerous center from which infection may spread."

"Healthy animals, or even men, flies, gnats, etc., may serve as vehicles to infection."

"Duvaine frequently produced the disease by inoculations with the probosces of flies which had been first permitted to pollute themselves with the blood from animals that had died from the disease."

"In 1864, 72,000 horses died in Russia alone from this disease. In the province of Novgorod (Russia), from 1867-'70, over 56,000 horses, cattle, and sheep, and 528 men, perished."

Let us now return to the plague in question and endeavor to explain its origin and spread. We find that it must have begun in the autumn months, when the river was falling, and while the cattle were yet housed and penned to protect them from the inundation. We find, also, that the plague imme-

*Englishwoman in Egypt, ii. 32, i, 59.

†Loc. cit.

‡See remarks of Dr. Billings in his treatise: *The Relation of Animal Diseases to Public Health*, p. 103.

§Loc. cit.

diately preceding this one was that of the "swarms of flies," and must, therefore, conclude that the existence of a few cases, or even of one sporadic case of anthrax among these cattle, was sufficient, under the circumstances, to produce an epidemic. The third and fourth plague had brought swarms of winged insects which annoyed man and beast, and led to a great extent upon the latter, bathing their legs and probosces in the suppurating hides of the animals. They naturally fly from beast to beast, and an infectious disease, which might otherwise have disappeared on the death of the animal afflicted, is now spread by these small pests with great rapidity; and there supervenes "a very grievous murrain." Considering the extraordinary facilities for propagating this disease, viz., the great number of stinging insects, the crowding together of the animals, and the dampness of the surrounding soil,* we would reasonably expect a very high death rate, for anthrax terminates fatally, among the lower animals under ordinary circumstances, in from 60 to 70 per cent. of the cases affected.

The Sixth Plague.—The plague of boils and blains immediately followed the murrain of the cattle. It consisted in a *boil breaking forth with blains upon man and upon beasts* (Ex., ix. 9). This plague, then, was not confined to the human race, but also attacked the lower animals. It would seem, therefore, that the preceding plague had spread from beast to man. This is a not uncommon experience with the disease under consideration—anthrax; and the same argument which will account for its diffusion among the cattle will answer here, for we are told that the flies tormented man and beast.

It is impossible to determine the relative parts played by the insects of the third plague and the insects of the fourth plague in spreading the disease from man to man, though it would seem, from the emphatic wording of the passages describing the plague of flies, that they caused more damaging results than the ones preceding them. As the plague of boils and blains probably did not appear until after the murrain had produced its worst ravages, and as flies are more permanently domiciled than gnats and mosquitoes, we must conclude that the latter were more directly concerned in spreading the dis-

*Moisture greatly favors the increase of this disease. At no time is the soil of Egypt more moist than immediately after or during the subsidence of the inundation.

ease at the time that it first began to give trouble, while the flies acted as carriers of the disease among the cattle, and from them to men, at a later period. As the gad-fly was doubtless one of the pestiferous creatures, his peculiar habits will account for much that was "noisome" in the fifth plague.

Anthrax in man generally assumes one of two forms, according to the manner in which the disease is acquired: an external or cutaneous form, usually mild in character; and an internal, or intestinal form, usually severe. A common cause of the milder variety is the sting of insects, or contact of an abraded surface with wool, hides, or other substances infected by animals diseased with anthrax. On the other hand, the internal anthrax is due to inhalation of septic material, or to its ingestion in the shape of food, especially the meat of animals which have suffered with this disease.

With reference to the external or mild form, Mr. James Law,* Professor of Veterinary Science in Cornell University, N. Y., remarks: "The question of its conveyance by insects has been much debated, but the constant occurrence of malignant pustule on the uncovered parts of the body goes far to settle the question. Bourgeois long ago noticed that it was most frequent on the face, hands, neck, and arms, and rare on the trunk. In sixty cases recorded by A. W. Bell, of Brooklyn, all occurred on the face, except two on the hands, one on the wrist, and one on the forearm. The bite of a fly or mosquito had in many of these cases proved the starting point of the malady."

The cutaneous manifestations of external anthrax are, vesicles, blebs, pustules, and crusts. These are accompanied by such great itching and burning that scratching is almost unavoidable. As a result of this, deep excavations are produced, and other portions of the surface inoculated. In a short time, if the case be severe, inflammatory thickening sets in, with œdema of the parts and excessive pain. Gangrene may ensue by the inflammation invading the cellular tissue, and in a short time death may occur from septicæmia; or, which is by far the most usual, the eschar may be detached by suppuration and the disease take a favorable turn.

*Pepper's System of Medicine, vol. i, p. 929.

The word "boil," in the text of the A. V., is to be understood as a raised inflammatory swelling on the skin, pustular in character.

"Blain" is the Saxon word for blister, or bleb, and corresponds to the *phlyctene* of our classifications.

So we see that the Scriptural author has named two of the most important manifestations of this disease, besides furnishing us with valuable hints as to its special variety, cause, and final results. The anthrax described by Moses and the anthrax studied by Pasteur, are one and the same disease.

As further evidence that the sixth plague was a cattle disease, we have the distinct statement from Moses that it was "upon man and upon beast." No other affection will as completely tally with the symptoms and course described in the Bible nearly as well as anthrax. It has been supposed by some that smallpox was the disease of this plague, and no less an authority than Willan has given expression to this supposition, based upon an ambiguous passage from Philo.*

Space will not allow an extensive consideration of this possibility, but suffice it to say that, apart from many other important objections, the comparative mildness of the plague should serve at once to exclude variola, for the most serious statement made of this plague is that "the magicians could not stand before Pharaoh because of the boils."

We infer from these words either that the wise men were put to great pain and inconvenience because of the boils, or that, the disease being on their face and extremities, they were too much disfigured to appear in the august presence of royalty.

Certainly the writer who recorded the mortality among cattle from the murrain, would not have forgotten to mention any death produced among men by the boils and blains.

The three plagues intervening between the sixth and the tenth occurred in the early part of the next year, when the fields were planted with vegetables, and when the grain was at different stages of growth.†

*Vita Mosis, i, 22.

†This plague must have occurred in February. Flax and barley are reaped at the end of this month, and wheat not until thirty days later. See Ex., ix., 31, 32.

These plagues had one factor in common—they all were destructive to vegetables and cereals. An extraordinary downfall of hail and rain, which, with the accompanying lightning, smote every herb of the field and brake every tree of the field (Ex., ix. 25); then a visitation of multitudinous grasshoppers, which ate “the residue of that which (is) escaped” from the preceding plague; and finally, three days of darkness.

Little need be said here in favor of the naturalness of these three plagues, or of the possibility of their occurring as described. Suffice it to say that rain and hail, though uncommon, are known in Lower Egypt; locust plagues are familiar to all travelers in the East; and the plague of darkness, in the shape of the scorching Khamáseen, a sand storm suffocating in its nature, but temporary in its stay, might easily overshadow the land with a darkness—“even darkness which may be felt.”*

The direct effect of the seventh and eighth plagues must have been the destruction of some of the cattle by the hail, and a crowding together of those that were housed, thereby increasing the chances of contagion from an uncured disease. This same argument will apply to human beings also, though less forcibly, for reasons which are apparent. Another opportunity for crowding animals together must have occurred during the three days of darkness, at which time the hot dust of the Khamáseen had every opportunity to stir up the manure and hay of the farm, field, and stable, to be inhaled by the half-suffocated and impotent men and cattle.

The series of calamities through which the Egyptians had passed during the previous eight or nine months, left many of them considerably debilitated and unprepared for further deprivation; and so it is that when the hot wind had swept the dry, impalpable dust of the stable and cattle pens into their nostrils and throats, and when the destruction of vegetables and green herbs left them nothing but animal food with which to sustain life—and that food, even to the milk of the cows,

*“This wind, which in Egypt is accustomed to blow before and after the vernal equinox, and generally lasts two or three days, usually rises very suddenly, and fills the air with such a mass of fine dust and coarser sand that the sun ceases to shine, the sky is covered with a thick veil, and the obscuration becomes so nocturnal that the darkness of the thickest fog of our late autumn or winter days is not to be compared with it.” Quoted by Keil from Schubert's *Reise*, ii., p. 409.

teeming with the germs of disease (bacilli anthraxis), it is no wonder that these scorbutic and half-starved people were decimated by a sudden and alarming mortality!

So it came about that the infection of the fifth and sixth plagues was likewise the infection of the tenth, but with this difference: the sixth plague, where it affected mankind, was for the most part a mild disease (malignant pustule), being due to pin-point inoculations from small insects, the sting of which could in many cases have been avoided by the use of extra covering on the commonly exposed surfaces; but the tenth plague was of a far more serious nature (internal anthrax), an inoculation from within, the poison being introduced by the respiratory tract and alimentary canal.

Compared with the external form, internal anthrax is more rapid in its course and more serious in its termination, death occurring, in fatal cases, according to Prof. Law,* within a period of thirty-six hours.

The same author emphasizes this fact further on when he says: "After internal infection, and where local symptoms only appear after general infection, the case is very hopeless."

The words of Exodus, xii, 29, inform us that the calamity affected alike the "first born of Pharaoh that sat on his throne," and "the first born of the captive that was in the dungeon;" and "all the first born of cattle."

There is no suggestion given us of the particular character or clinical symptoms of this plague, as in the case of the one of boils and blains; but several facts about it are stated—even emphasized: it was sudden, it was fatal, and it attacked man and beast.†

Besides this, it was the culmination of many extraordinary

* Loc. cit.

† It is proper that we should not pass over another statement made in connection with this plague, namely, that it attacked the *first born*. There is no reason, however, for believing that it attacked *only* the first born, nor that all of those who suffered *died* of the disease. The Hebrew word translated "dead," is a participle (present), and means, literally, "dying," or "in a dying state." (Palfrey, loc. cit.) "It is urging it, then, altogether too far," says Palfrey, "to insist that in every house some death, even of an animal, actually took place."

The death of the eldest son of the king, together with the first born of a few other prominent persons in Egypt, would be sufficient to suggest the peculiar and characteristic feature of this plague. It is perfectly plain, however, that in other texts of this book (Exodus), the word "all" is used to express "a great number," and is not intended to be taken in its absolute sense. So we conclude that a large number of the first born of Egypt, both of man and beast, together with others, were smitten by the plague, and that in nearly every dwelling there was either a human being or an animal lying very ill of the plague, some of them dying from it.

insanitary conditions, not the least important of which was the production and spread of a contagious cattle disease, known to be extremely annoying to man when contracted by him through insects, and terribly fatal when received internally by the lungs or stomach.

In studying the etiology of this plague, it should be remembered that we are limited to a consideration of the few affections to which *man* and *cattle in general* are alike subject; and as we have shown that the disease known as anthrax was in all probability the cause of two of the earlier plagues, it would be illogical, to say the least, to discard it when we remember that the many conditions that followed the sixth plague were just such as would be likely to cause the continuance and spread of its disease.

Besides those already referred to, there are no other diseases and natural phenomena known to us which could have brought about great mortality to men and cattle in the tenth plague. Other fatal affections communicable from animals to men produce other symptoms than those alluded to in the Scriptural text, and are confined to one or two species of animals. This disease attacked horses, asses, cows, sheep, goats, and other animals. Some such general cause, as the pollution of the river, would dispense with the necessity for naming a specific disease as the death-producing agent of the tenth plague; but as the changes in the water of the Nile had ceased some months before, and as the tenth plague occurred in the spring time, when the river water is purest and most potable, this possibility must be put out of consideration. An unusually severe Khamáseen, with its parching sands, might have produced suffocation in a few debilitated or old (first born?) persons; but it is more likely that the effect of this wind was to weaken and inconvenience rather than to destroy.

Up to this place we have passed over without comment the portions of Exodus which record the immunity enjoyed by the Hebrews from the plagues which tormented the Egyptians; and while we are not ready to accord to the oppressed race an absolute freedom from all the features of the plagues, it seems to us highly probable that the Jews, a large body of whom inhabited the land of Goshen, a country assigned them in the

time of Joseph, and somewhat remote from the Nile and the thickly settled portions of Egypt, could at least have escaped the severity and inconvenience of the plagues that first annoyed and then tormented Pharaoh and his servants.

Referring to this land, Sharpe* makes the following pertinent remarks: "The Valley of the Nile is surrounded with high land on the edge of the desert, which, though uncultivated, is not wholly barren and unprofitable. Here the Arab dwells in his tent, while his herds browse on the wild herbage. This strip of land by a known and moderate degree of labor, may be watered by canals and wells, and thus be made to yield a return to the husbandman. Such was the soil of those places in the land of Rameses or Heliopolis, where the Israelites were allowed to pitch their tents and tend their flocks; from the word *Geshe*, or *upper* lands, perhaps, they called it the land of Goshen. It was neither watered by rain from heaven nor by the overflow of the Nile, but it was to be watered laboriously by means of trenches and hand pumps and buckets."

It is fair to conclude, then, that the geographical position of the land of Goshen, making it distant from the Nile and therefore distant from the scene and source of the plagues, gave to the inhabitants of this country an immunity not enjoyed by any of those who lived in or near the region of the periodical inundation.

The Jews, instructed by the wisdom and profound erudition of their leader, were therefore to a great extent successful in warding off the contagious disease which was producing such havoc among the Egyptians; and these preventive measures were continued by them up to the very last moment of their stay in the land of their oppressors, and, in fact, for seven days after their exodus had begun.

Let us carefully study the preventive measures, and see if any new light can thereby be thrown upon the disease of the Egyptian plagues.

Looking back from the vantage ground of the Nineteenth Century upon the details of the institution of the Pass-over, as given in the twelfth chapter of Exodus, the knowledge of preventive medicine and hygiene displayed by the

* History of Egypt, vol. i, pp. 40, 41.

Scriptural author must be considered as having been as profound as it was effective. The spread of a contagious disease among man and beast was thus avoided; and if we regard this contagious disease as anthrax, how much more intelligible the many directions of Moses become! *For during the four days which preceded the great mortality among the Egyptians which resulted in the escape of the Hebrews from bondage, the latter people had been taking special sanitary precautions with reference to food.* This food consisted of meat and bread, but the meat was a roast lamb, and the bread was without leaven!

We have seen how the Egyptians were probably inoculated by partaking of animal food; let us now see how the Jews were able to eat meat and remain uninjured.

1. They took a lamb "without blemish, a male of the first year," and put it aside to be watched for four days. In another book * the words "without blemish" are more fully defined, for we read: "Blind, or broken, or maimed, or having a wen, or scurvy, or scabbed, ye shall not offer these unto the Lord."

It must be a lamb, then, under the age of one year and over the age of eight days; it must not be scurvy nor have any sort of scab; it must not be diseased. After being kept four days, any such affection would certainly become apparent.

2. When killed, its blood was to be sprinkled upon the door posts, its flesh roasted with fire, and all of its edible portions taken as food, while that which was not eaten was to be burned.

The direction to sprinkle the blood upon the door posts, and the injunction given elsewhere not to eat the blood, were very necessary, as the Egyptians were in the habit of eating blood.† The roasting of the lamb with fire was a means of applying the intensest form of heat, and consequently it was the method best adapted to the destruction of bacteria, and other disease-producing substances. Indeed, the Jews are especially enjoined to "eat not of it raw, nor sodden at all with water, but roast with fire."

3. The smallness of the animal was an additional safeguard against infected meat, for naturally a lamb can be cooked through and through more thoroughly than a sheep or other larger animal.

* Levit., xxii. 22.

† Wilkinson's Manners and Customs of the Egyptians, American Edition, vol. iii, ch. xv.

4. The fewest number of lambs were slain—only as many as could be eaten, thus reducing to a minimum the possible sources of contagion.

5. For seven days after the slaying of the lamb they were to eat unleavened bread, and the dough for making this they carried on their backs as they left the country. So we see that with a kind and quantity of bread that will keep best under unfavorable conditions, and with the injunction to *eat it*, the Jews passed through and out of the infected land free from the prevailing disease.

Here, then, is a catalogue of extraordinary sanitary precautions to be taken by the Jews in order to avoid the existing epidemic, and these precautions, even in their details, refer to the disease known to us as anthrax.

On the eve of the Passover, and the seven days following, the Jews had been cautious as to diet, and the Egyptians had not. The Egyptians had eaten cattle that were diseased from anthrax, and probably drunk blood teeming with bacilli; the Israelites had eaten lambs without a single blemish upon them, and sprinkled the blood, with a brush of hyssop, upon the door posts. As a further and interesting proof of the innocuousness from anthrax of the flesh chosen by the Hebrews at this critical period, we will quote from Dr. Billings: * “Feser has made some interesting experiments with regard to the filtering ability of the milk glands in sheep. He has inoculated ewes with lambs by their sides, and proved that infection had taken place, both by examination of the blood and by experiments with the same upon other animals; but the lambs did not become infected from the mother’s milk, although isolated bacteria were to be seen in the same. Inoculations made with such milk, however, produced the disease in other animals.”†

In conclusion let us briefly summarize what has long been said with reference to the identity of the sixth and tenth plagues.

* Loc. cit.

† The remarks here made do not refer to the disease known as symptomatic anthrax (*charbon symptomatique*), which occurs in young cattle and in lambs. It is characterized by “loss of appetite, debility, and *lameness, due to the development of a tumor*. * * Death usually occurs within thirty-six to forty-eight hours after the appearance of the first symptoms. The disease is always fatal.”—Sternberg. (The italics are the author’s.) Compare these facts with the injunction of Moses to keep the lamb for seventy-six hours; to avoid maimed (lame) animals, and those having a wen (tumor).

It has been shown that the plague of gnats and the plague of mosquitoes brought insects that stung and wounded men and beasts, and that the plague of murrain followed the onset of the pestiferous creatures: a *post hoc* which becomes a *propter hoc* when we consider (*a*) that insects are common carriers of disease among cattle, particularly when there are open sores; and (*b*) that, as the insects were numerous and the disease epidemic, it is reasonable to conclude that this was an infectious disease spread by the insects.

Again, it has been shown that the cattle disease called anthrax or charbon, is familiarly known in Egypt at the present day; that this disease produces boils and blains on man when he is externally inoculated, and a sudden and fatal disease in him when internally inoculated; that the cause of external anthrax in man is from the poison being placed in contact with his cutaneous surface, especially through some abrasion, and that this is usually produced by a wound made from an insect. On the other hand, internal anthrax is produced by inhalation of the germ in dust or other fine particles, or through food, more particularly milk and diseased meat.

It has been shown that all, and more, of these conditions existed at the time of the sixth and tenth plagues: and that, the same disease which caused only annoyance when inoculated by insects in the sixth plague, was likewise capable of producing death when introduced directly into the system in the tenth. Now, while it was reasonable to *suppose* this to be the case on *a priori* grounds, there were certain prophylactic measures taken previous to and during the tenth plague by a portion of the population which gave to that population either very considerable or complete immunity from the prevailing pestilence.

And the precautions which gave this immunity all referred to food supply, showing that the cause of the tenth plague lay in substances taken into the stomach.

Nay, more; it may be stated without fear of contradiction, that had a modern scientist been asked to suggest how the people of a nation, living on the border land of a district infected with anthrax, could best continue to eat bread and meat with least risk to themselves, he could not have suggested

any product of the vegetable kingdom better suited to the purpose than unleavened bread, nor any product of the animal kingdom safer than the roasted flesh of a lamb without blemish.

In conclusion, the author desires to express his appreciation of the kind services rendered him by his friends, Rabbi I. L. Leucht, and Dr. A. McShane; the former having suggested some useful changes in the preparation of the paper, and the latter having furnished several translations from the German.

THE IMPROVED DISINFECTING AND FUMIGATING SYSTEM AT THE MISSISSIPPI-RIVER QUARANTINE STATION.

By S. R. OLLIPHANT, M. D.,

President of Louisiana State Board of Health.

Without entering into the history of when "sulphur dioxide gas" was first used for ship purification and by what methods it was produced, I will state that the credit is due Dr. Joseph Holt and the Louisiana State Board of Health, of which he was at the time President, of establishing public confidence in this procedure, and also of building the foundation upon which I believe it possible to develop a truly scientific quarantine service.

A few changes made by the present board, and thought to be in the way of improvement, has prompted the writing of this article.

The plan pursued by the "Holt" Board of Health consisted of the purification of ship and effects by bi-chloride of mercury solution, heat, and sulphur dioxide gas.

The bi-chloride of mercury solution, strength 1 to 1,000, is used for sprinkling decks, cabins, and holds of ships prior to fumigation, and also such articles as can not stand heat-disinfection, viz.: those made of rubber, leather, etc. This part of the system is continued without any change.

Heat-Disinfection.—Originally, the heating chamber was constructed of wood and modeled after the drying chambers of laundries. It consisted of a structure, divided into airtight compartments, heated by steam pipes running through

the entire length of the chamber. Dry heat was applied first until nearly 200 deg. Fahr. were obtained, when steam was introduced, raising the temperature quickly to 230 deg. Fahr. Racks arranged on rollers, one in each compartment, were constructed for the reception of articles to be disinfected, and when loaded could easily be rolled in and out of the chamber.

Although the walls of this chamber consisted of seven non-conducting media, it was found that there was danger of fire when a high degree of heat was applied. It was also found objectionable owing to the difficulty of equalizing the heat in every part of the chamber.

A representative of the United States Marine Hospital Service, Dr. Kinyoun, who made an inspection of the system, suggested that this wooden chamber be substituted by steel cylinders, into which steam could be introduced under pressure, thereby rendering the process more efficient, insuring an equal distribution of heat and the possibility of attaining and maintaining a much higher degree of temperature.

The board had three cylinders constructed, each fifty feet long by eight feet in diameter, supplied with racks running on a track overhead, and a coil of $1\frac{1}{2}$ -inch iron pipe connected with a manifold, through which the steam for heating purposes is conducted. (See diagrams.)

These cylinders proved to be all that could be desired, with but one objection, the lack of equalization of the temperature; while one end of the chambers would attain a temperature of 230 deg. Fahr., the other end would not quite reach 200 deg. Fahr. This difference was due to the fact that the steam pipes were fed and drained at one and the same end of the chambers. This defect has now been remedied to a great extent, the difference having been reduced to 6 deg. Fahr. by draining the pipes from the end opposite the one from which they are fed; and I am informed that it can be entirely overcome by introducing the heat and steam into the cylinders at their center.

Sulphur dioxide gas is generated and forced into the ships' holds with a view to killing all germs of diseases therein contained. With this object in view it is desirable to obtain the gas in as concentrated a form as possible. It has been

stated by bacteriologists that less than a 10 per cent gas is not absolutely sure of killing all disease germs. Some germs have greater vital powers than others. While a 3, 4, or 5 per cent gas might be fatal to some, a 10 per cent gas might be considered fatal to all. These conclusions have been arrived at by actual experiment.

Dr. Holt's furnace for generating this gas was divided into three compartments, each supplied with six pans for the sulphur. The face of this furnace was open. The pans were supplied with sulphur and ignited, and a current produced by a suction fan drawing the fumes through a pipe connecting with the furnace through the fan, thence driving them on into the ship's hold.

By this process a gas of a very uncertain strength was produced.

The succeeding board changed this apparatus into a closed furnace, and changed the position of the fan, making it a blowing instead of a suction fan (see diagrams). With the fan thus arranged there was danger of firing the ship, and with a view to overcoming this danger the pipe leading from the furnace to the ship was lengthened and curved in order to obstruct any burning particles of sulphur that might be carried into the current. This pipe measured about 250 feet in length. Had this gas been of a 10 per cent strength there could have been no fear of fire, as combustion can not take place in an atmosphere that has one-half its oxygen replaced by sulphur dioxide gas. As an actual fact the gas generated by this furnace was not stronger than 4 to 6 per cent, as was ascertained by repeated tests made by Mr. H. Bonabel and myself. While with this method it is theoretically possible to get a 10 per cent gas, it is practically improbable that more than 6 or 8 per cent would ever be obtained.

The question naturally forced itself upon the new board, how a stronger gas could be generated.

Learning that Mr. H. Bonabel and Dr. Jos. Albrecht, two experienced manufacturing chemists, had been engaged in the manufacture of this gas for a number of years for commercial purposes, their advice was sought and their factory visited. It was found that they were making a gas of from 18 to 20 per

cent, and the board immediately concluded to improve on the old method, and, with the advice and assistance of the aforementioned gentlemen, constructed a furnace that yielded a 19 per cent gas by actual test. (See diagrams.)

The principle might be briefly stated to consist in keeping the sulphur in a molten state, independent of the oxygen supplied for the formation of the gas, by a fire underneath. The strength of the gas is regulated by the supply of air, or oxygen, and the speed of the fan.

By this method it is possible to replace the entire oxygen of the atmosphere by sulphur dioxide.

The apparatus consists of a boiler-like cylinder, with a single pan in the bottom, of a capacity of one barrel of sulphur. At the further end of this pan is a veil, or partition, extending from above to within a few inches of the pan. This veil is to prevent the heated air from rising and going directly out through the escape pipe before the sulphur has combined with the oxygen. In this manner all the fumes leaving the furnace have to escape near the sulphur surface before reaching the outlet pipe which taps the furnace behind the veil.

The front of this furnace is closed, with the exception of a door for feeding the furnace with sulphur and two small openings—one on either side of this door, for regulating the play of air on the sulphur surface. These openings can be closed or opened as desired. Underneath this furnace is a fire box, arranged in the same manner as for steam boilers, with ash pan, etc.

The outlet pipe from sulphur furnace, as stated above, taps the cylinder behind the veil, and curving over, leads down into and within six inches of the bottom of an iron tank or reservoir of a size of about four feet cube; the bottom of this reservoir is covered with a layer of cement to prevent corrosion.

Should any particles of burning sulphur be drawn into this reservoir, they will naturally be precipitated to the cement-lined bottom, where they will remain.

The pipe connection between the furnace and reservoir has a diameter of eleven inches.

From the reservoir the gas is drawn by a "Sturtevant" fan, through an eight-inch pipe issuing from the side of the tank,

but having a curved section on the inside reaching nearly to the top, and is forced through a lead of pipe extending through the roof of the tug to the pilot house, and thence into the ship's hold.

It will thus be seen that, as the gas entering the reservoir is nearly led to its bottom, and having to leave again through the curved section of pipe near the top, the direct current is broken, and any particles of burning sulphur that may enter are more apt to be lodged at the bottom.

The difference of size of pipe of entrance and exit was made with a view of having a slow current in and from the furnace to the reservoir. The same volume of gas leaving the reservoir by a smaller pipe, would naturally be carried at a greater speed.

The whole length of pipe from furnace to top of pilot house, is not over seventy feet.

Even with this short pipe there can be no danger of fire, which was demonstrated by the following test: A quantity of pine shavings was put in a hogshead, and the gas played on them through a short lead of pipe at a high temperature without even scorching the shavings. Coal oil was then sprinkled on the shavings and sides of hogshead, and the whole ignited. When in full blaze, the gas was again turned on and the flames were almost instantly smothered.

The advantages claimed for this apparatus are, First: It does away with all dangers of fire; (ships having been set on fire with previous furnaces). Second: the lessened amount of galvanized piping for conducting the gas; an economy worth considering, when it is remembered that this pipe costs \$1.50 per foot. Third: being relieved of this excessive amount of pipe, it is more easily run and manipulated, and lastly the very great superiority of the gas, being at least three times the strength of that formerly generated. The construction of this apparatus is certainly a step toward establishing our service on a scientific basis.

It is proposed to endeavor to reduce the working of our system to a mathematical precision—that is to say, by experiment and calculations it is hoped at some future time, by estimating the cubic capacity of ships' holds, the cubic feet of gas produced to the pound of sulphur, the length of time re-

quired to consume this sulphur, and the amount that goes over as waste in the form of sublimed sulphur, to be able to know just how to charge the furnace, and what length of time to keep up the fumigating process.

The empirical method formerly in use of generating gases of uncertain and unknown strength, and of pumping this gas into ships' holds for a certain time without definite reason therefor, seems, to say the least, very unphilosophical.

In conclusion, I submit Dr. Jos. Albrecht's letter to me, written shortly after his return from a trip to the quarantine station for the purpose of inspecting the working of our new apparatus:

NEW ORLEANS, June 3, 1890.

Dr. S. R. Olliphant, President Board of Health, New Orleans: DEAR DOCTOR—The highly satisfactory results obtained with your new fumigating apparatus at the Mississippi River Quarantine Station, in presence of members of our Legislature and other scientific men, must have convinced these gentlemen of the great superiority of your apparatus over the one used heretofore for the production of dioxide of sulphur gas by combustion of sulphur.

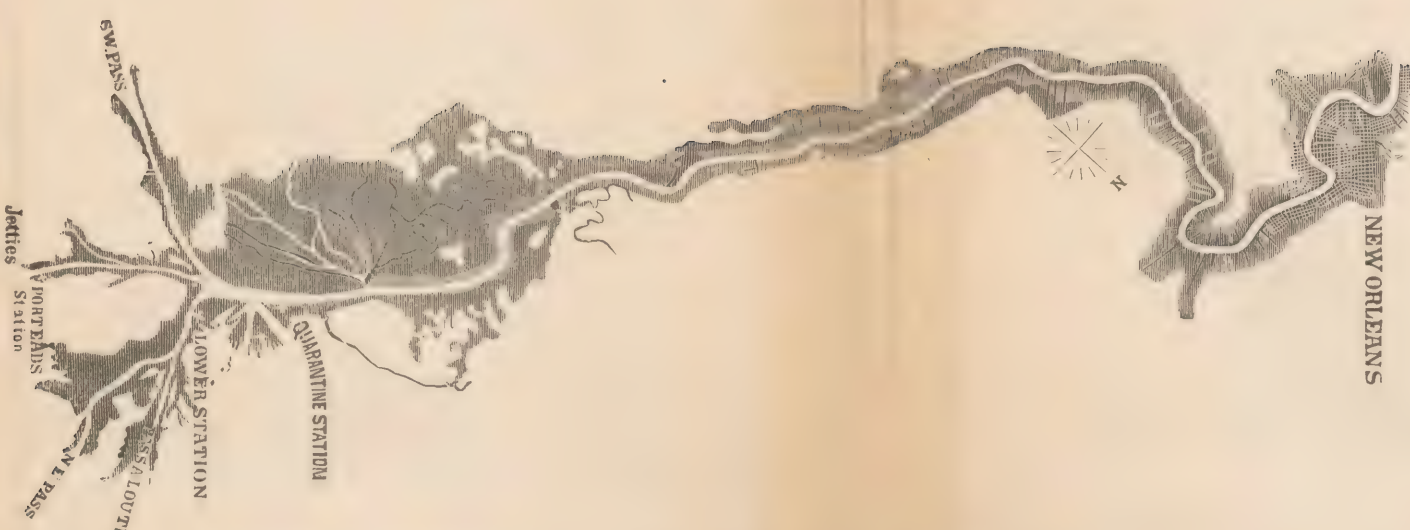
In order to get an effective germ or microbe destroyer it is of paramount importance that the sulphur dioxide gas be as concentrated as it is possible to make it by the combustion of sulphur, and in this respect your apparatus is a perfect success, as it enables you to make a SO_2 gas at least three times stronger than it had ever before been made.

By the use of my "gas tester or volumeter of sulphurous acid present or diffused in air or nitrogen," you can determine the exact quantity of SO_2 contained in the gases produced by the furnace, a result which heretofore was not ascertained.

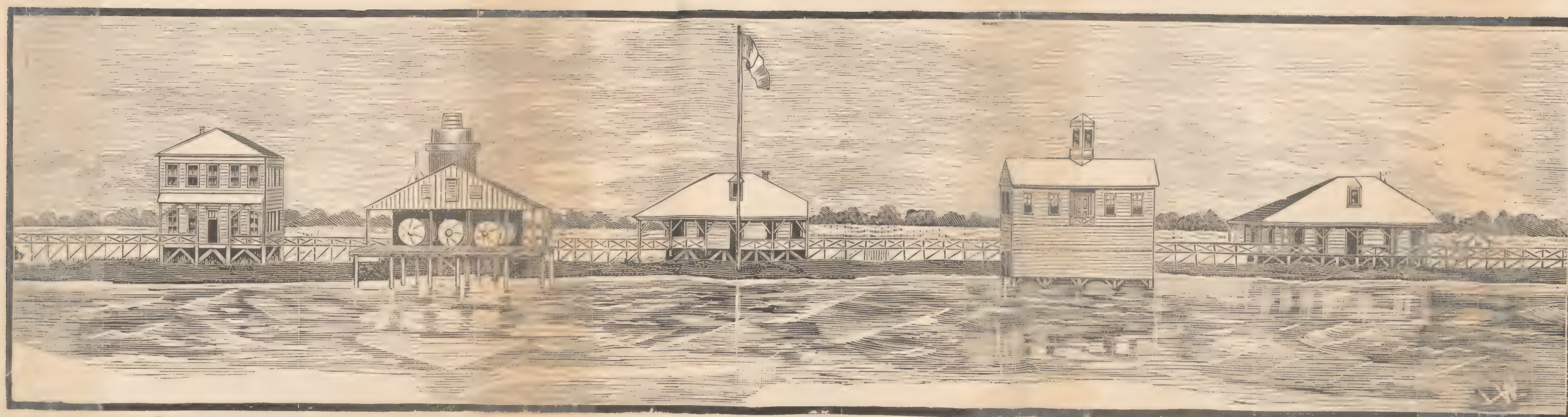
This instrument is also a sure guide to the operator in regulating the combustion of sulphur, the admission of air to the furnace, and the regulation of the speed of the fan.

If the gas formerly produced, containing only 4 or 5 per cent of pure dioxide of sulphur, has yielded good results in disinfecting vessels, how much more energetic must be the gas obtained now, being at least three times stronger, i. e. 15 to 18 per cent? Very respectfully,

JOSEPH ALBRECHT, M. D., *Chemist.*



MAP OF MISSISSIPPI RIVER, FROM NEW ORLEANS TO GULF.
Showing Location of Quarantine Stations.



Boatman's Quarters. Disinfecting Shed, with elevated tank above for bi-chloride of mercury solution. Assistant Physician's Residence and Customs Office. Boathouse and Telegraph Office. Physician's Residence.

VIEW OF MISSISSIPPI RIVER QUARANTINE STATION.



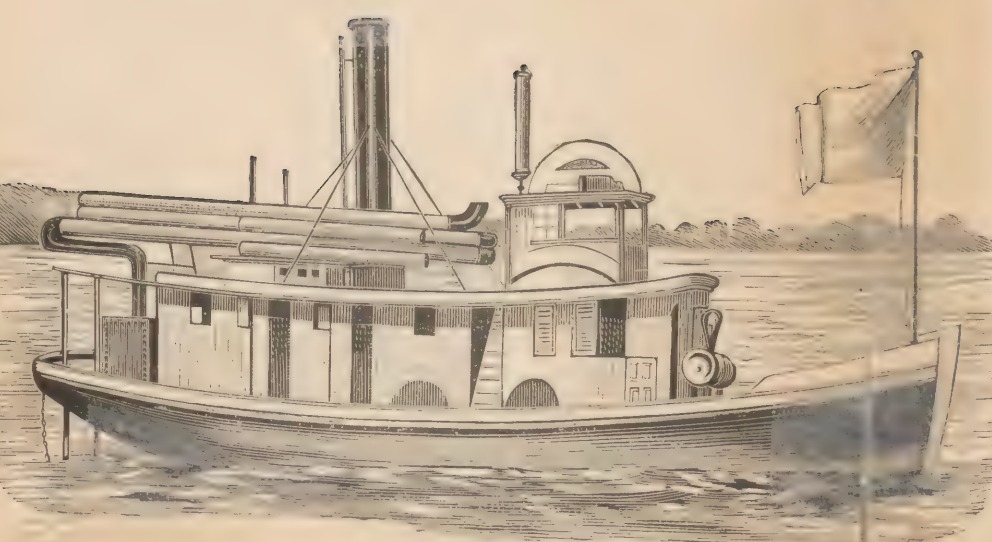
DISINFECTING SHED.

Showing Tank above containing Mercuric Chloride Solution. Heating Chambers below



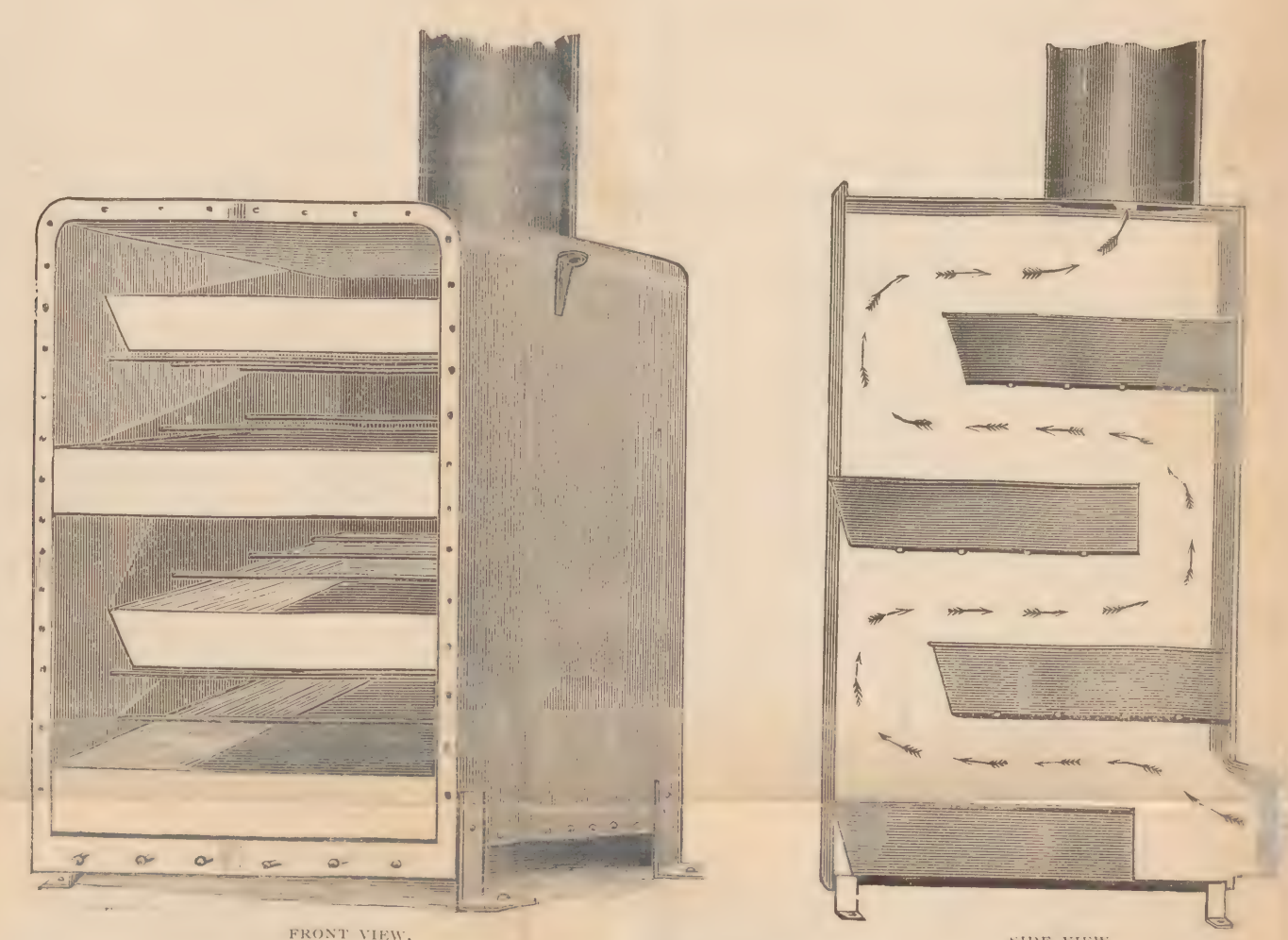
TUGBOAT IN USE SINCE MAY 20th, 1890.

Showing New Improved Sulphur Furnace in rear of boat, and pipe carrying the gas to top of pilot house, from whence it is led into ships' holds.



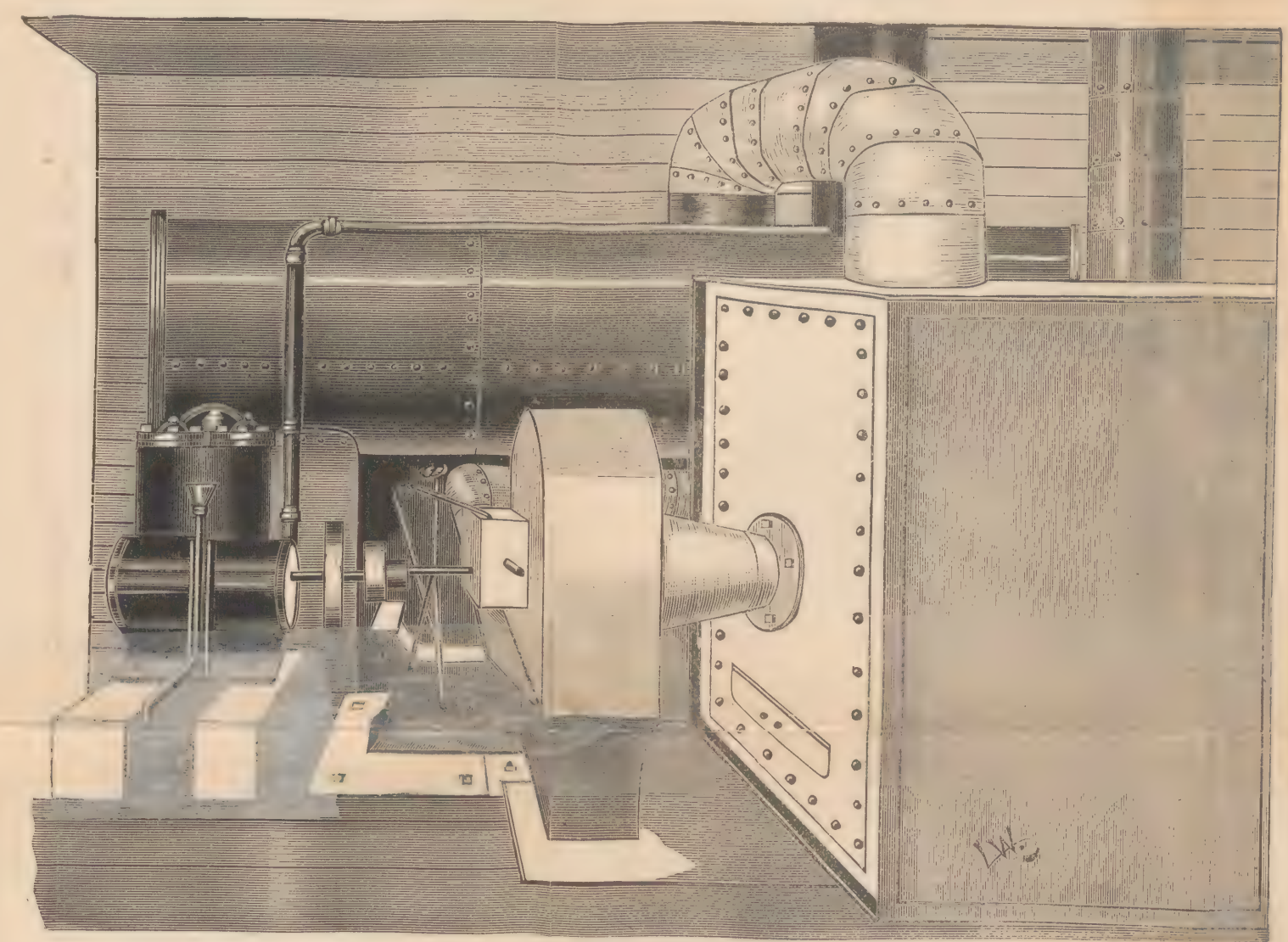
TUGBOAT WITH FUMIGATING APPARATUS.

In use since 1889, showing sulphur furnace in rear and pipe on tugboat, from whence sulphurous acid gas was led into ships' holds.



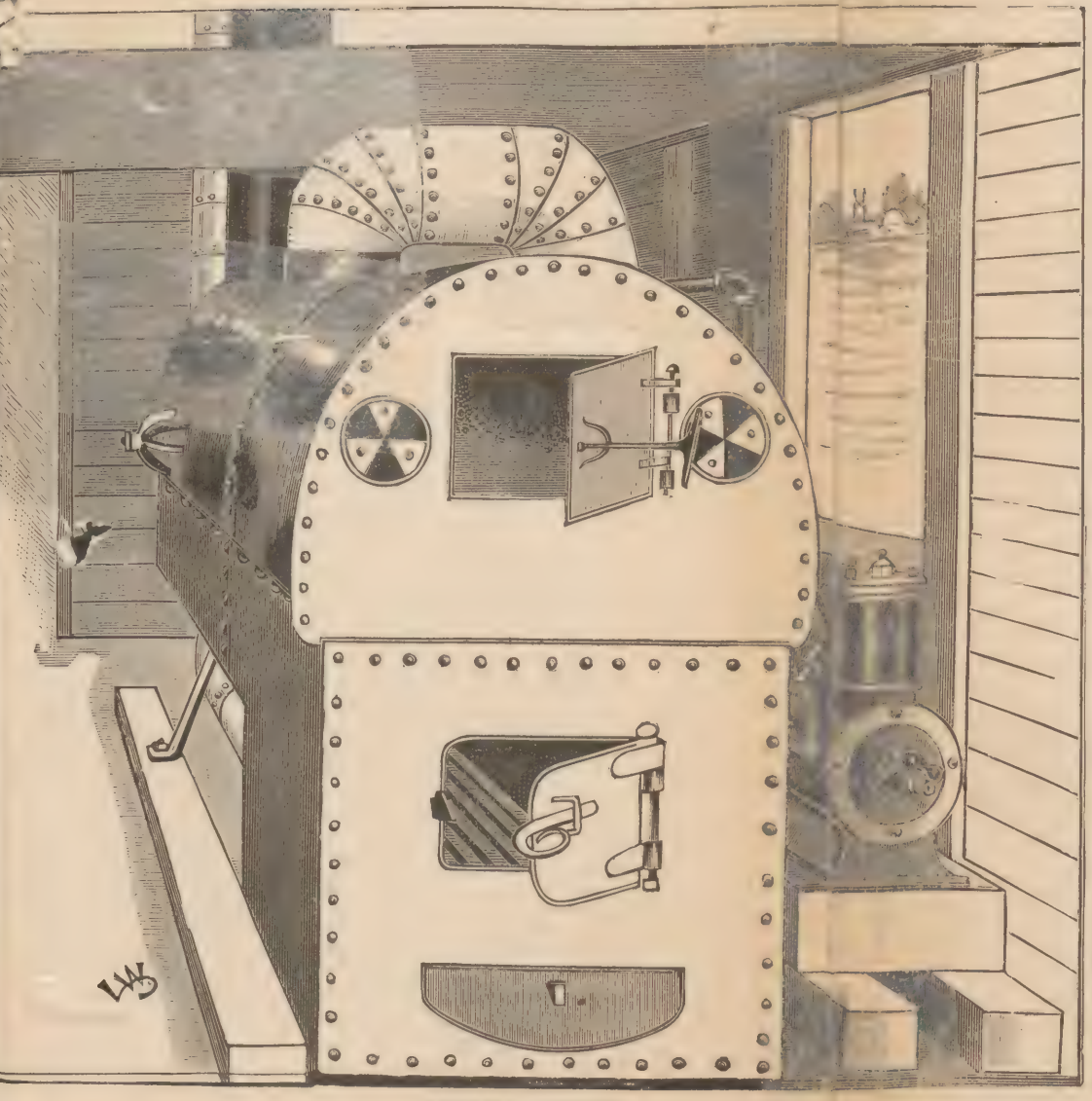
REVERBERATORY FURNACE FOR BURNING SULPHUR.

In use in 1889, showing sulphur pans and introduction of air current at bottom of furnace, forcing the sulphurous gas through pipe on top.



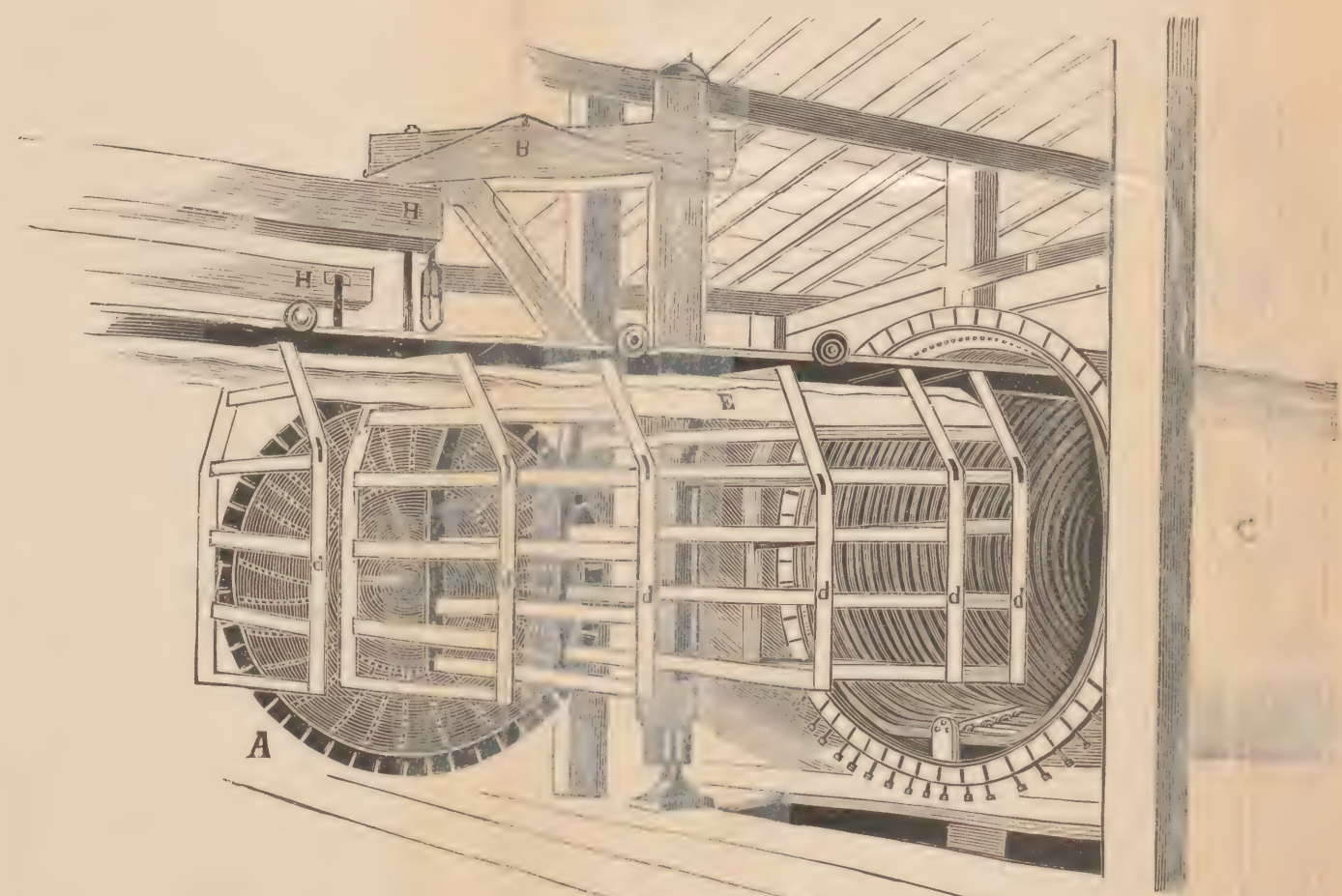
SIDE VIEW.

Of Improved Furnace for the production of Sulphur Dioxide Gas, in use since May 20th, 1890. Showing sulphur furnace, reservoir and exhaust fan. Curved pipe carrying sulphur gas into reservoir continues on the inside to within six inches of bottom. Section of pipe connecting fan with reservoir curves upward inside of reservoir to within six inches of top.



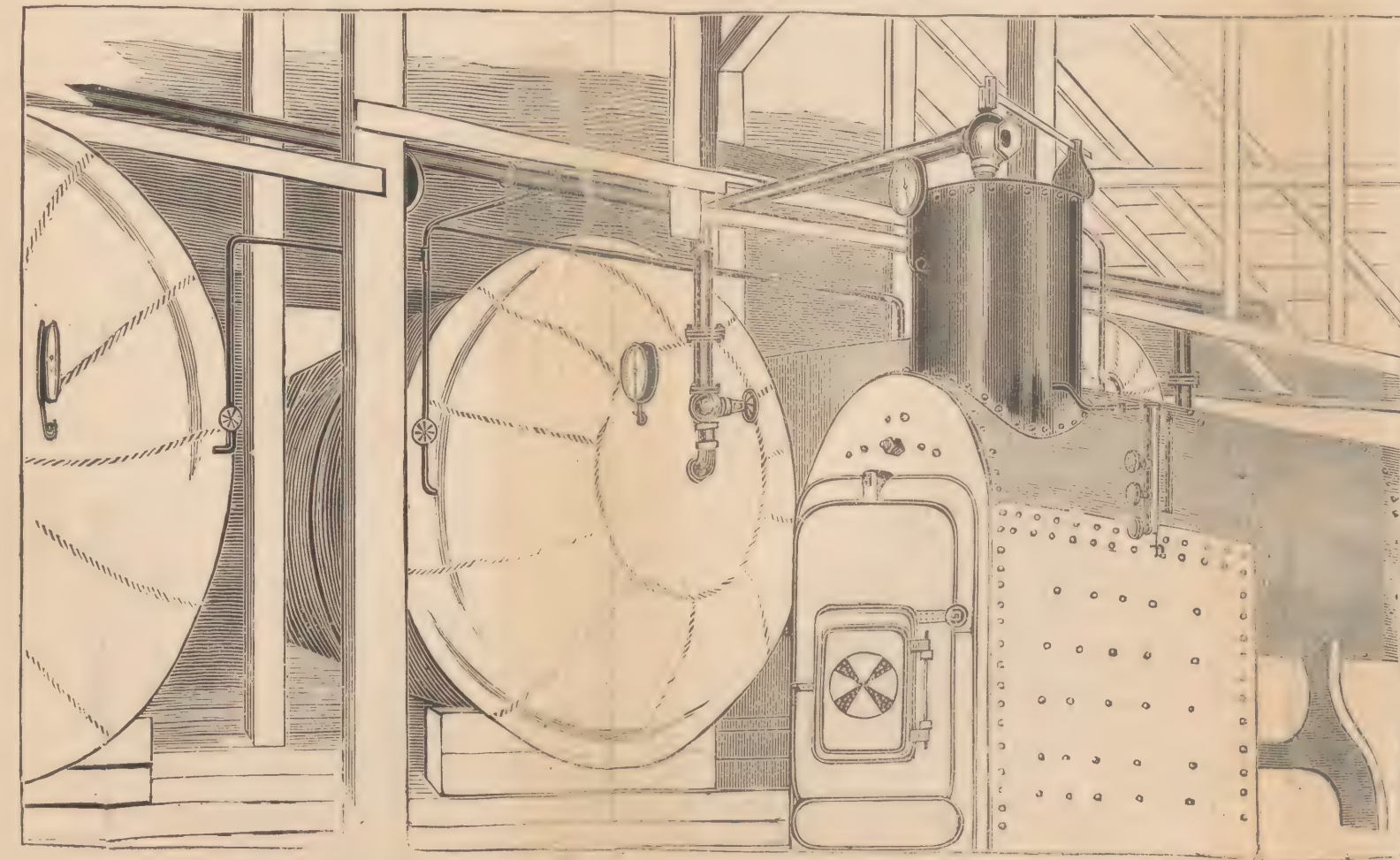
FRONT VIEW.

Improved Furnace for the production of Sulphur Dioxide Gas, in use since May 20th, 1890, showing sulphur furnace with fire box underneath, and curved pipe carrying the gas into reservoir.



END VIEW OF OPEN HEATING CHAMBERS, WITH RACKS DRAWN OUT.

A.—Spherical head of Heating Cylinder swung back. B.—Turning Crane from which Cylinder head is suspended. C.—Heating Cylinder. D.—Traveling racks on which the material to be disinfected. E.—Canvass over racks to prevent water dripping on racks. H.—Beams in shed from which tracks are suspended.



REAR END OF HEATING CHAMBERS, SHOWING STEAM CONNECTIONS.

PROCEEDINGS OF SOCIETIES.

THE TEXAS STATE MEDICAL ASSOCIATION.

[CONTINUED FROM LAST MONTH.]

Dr. Q. C. Smith, of Austin, showed a speculum, fashioned somewhat after the order of a Sims's, but with more than one blade, which he claimed was self-retaining and capable of greatly distending the vagina. This he designed for use in cases of placenta prævia. He advocated prompt action. By means of this speculum he exposed the os, distending the vagina so as to give him ample room for all his manipulations. He proposed to stop the hemorrhage with astringent solutions, alum and water being mentioned as one, and separating enough of the placenta to get by it into the uterine cavity. He would bring down the foot so as to plug the cervix and stop the hemorrhage until delivery could be accomplished. Dr. Smith spoke very positively of the success of this plan of treatment.

Dr. Leake, of Dallas, had some experience with cases of placenta prævia, and he favored Braxton-Hicks's method as the most satisfactory and most applicable to all cases. He had never had to introduce more than the index finger into the uterus. He did not see the advantages of Dr. Smith's instrument.

Dr. Ward related a case of central implantation of the placenta, in which he had had great trouble in getting through the placenta to use Braxton-Hicks's method. He did not think that with the experience of such a case, one would speak so positively as Dr. Smith had done; nor did he think the instruments shown would have been of any special assistance to him.

Dr. Sears, of Waco, saw the advantages claimed for Dr. Smith's instrument, in that, by rendering the parts visible, it would facilitate a separation of, and getting by, the placenta, so that Braxton-Hicks's method might be more quickly and more easily applied.

Dr. Ghent, of Belton, believed in separating the placenta at once, insisting that the uterus can not contract so long as it is attached. After this, he was in favor of rapid delivery.

Dr. Carhart, of Lampasas, read a paper on

“THE NECESSITY FOR SPECIAL STUDY ON THE PART OF THE GENERAL PRACTITIONER OF THE MEDICINE AND HYGIENE OF CHILDREN.”

He showed first the immense mortality of the early years—25 per cent of the children born in wedlock in cities dying in their first year, and then he showed the many difficulties of

diagnosing the diseases of very small children on account of their inability to describe their symptoms. He carefully reviewed the means of diagnosing open to physicians in treating children, and the value of each.

Dr. Evans presented a paper on a case of peculiar antepartum hemorrhage, which was read by caption.

At 2 P. M. the section on surgery was called, Dr. York, chairman, who read a report of the progress of surgery during the year just passed. The effect of the introduction of antiseptics and antiseptic dressings was carefully dwelt upon. The treatment of erysipelas by adhesive strips, very tightly fastened to limit the inflammation, and the treatment of the carbuncle by free incision, were mentioned. Of abdominal surgery much was said, and especially of Senn's operation of circular enterorrhaphy, which was described through all its stages, from the first inception, when decalcified bone rings were used, to its present perfected state.

Dr. W. B. West, of Fort Worth, exhibited a case of Pott's disease in a little girl five or six years of age, which was being treated by the plaster jacket and jury mast, and was progressing very favorably.

Dr. H. L. Fountain, of Bryan, read an excellent paper on brain surgery and fracture of the skull. The doctor exhibited a drawing showing the side view of the left cerebral hemisphere, and pointed out upon it the different fissures and convolutions, giving their names. He then pointed out the different cerebral centers, giving a short outline of how they had been located, and also described by what landmarks on the exterior of the head they could be located. He also showed an instrument constructed by Dr. Wilson, of England, consisting of a metallic band which was passed around the head so as to cover the glabella and the inion, while a second band passed over antero-posteriorly from the glabella to the inion, and a third shorter band was fastened to the second extending downward and forward at an angle of 67 deg., and being attached to the second band, so that it could slide back and forth. The second band was accurately divided into spaces, so that the glabella's distance from the inion could be exactly ascertained, when by placing the third band at a point 55.7 deg. of the distance from the glabella to the inion, the third piece would correspond to the fissure of Rolando. He then read the notes of five cases of cerebral injury, which he had trephined and which had recovered. Also two cases of fracture of the skull treated successfully.

Dr. B. F. Britain read a paper on the treatment of hemorrhoids, in which he favored injections, and gave a number of statistics to show the advantages of this form of treatment.

Carbolic acid as the agent to be injected in the various solutions and in various formulas was discussed. Dr. Shuford, of Tyler, was quoted as using following formula by preference:

Glycerole of salicylic acid	5iv.
Glycerole of boracic acid	5iv.
Carbolic acid	5iii.
Mix.	

Using five to ten minims in each tumor. Dr. Agnew preferred a glycerole of tannin, borax and carbolic acid. This paper was received and referred to the publishing committee.

Dr. Knott, of Goliad, related a case of laparotomy for intussusception of the intestine, which was performed on the eleventh day, only at the earnest request of the patient, with the idea of giving him the benefit of any desperate chance. The intussusception was found at the junction of the ileum and cæcum, of a large portion of ileum through the ileo-cæcal opening, the intussuscepted bowel and most of the ascending colon were gangrenous and were removed. Within the lumen of the bowel attached to the mucous membrane just where the gangrenous portion began, was a tumor the size of a large almond or a small pullet's egg, which, examined microscopically, looked like an enlarged gland. This Dr. Knott had preserved in alcohol, and exhibited it to the convention as the point of special interest about the case, springing the query as to what was the nature of this tumor, and what, if any, relation did it have to the intestinal obstruction. The tumor was turned over to Dr. Baird, of Dallas, to be examined microscopically.

Dr. B. F. Britain presented a paper "On Carcinomata of the Breast," which was read by caption and referred to the committee on publication.

Dr. Q. C. Smith exhibited some instruments which he used in the treatment of hemorrhoids. His process consisted in dropping the pile through the slit in a bivalve rectal speculum—clasping its pedicle—withdrawing the blood by means of a hypodermic syringe with a long needle and injecting a few drops of solution of carbolic acid.

Dr. W. M. Powell reported a case of compound comminuted fracture of leg, followed by extensive necrosis, eventually necessitating amputation. The necrosed bones, in form and shape embracing nearly the complete normal bones, were exhibited.

Dr. H. L. Bibb, of Saltillo, Mexico, exhibited a silver tracheotomy tube which had been left in position in the trachea of a child for a year, but had eventually given trouble, and he thought had caused the death of the patient. His purpose was to emphasize the fact that it was a false impression that a tracheotomy tube could be left in without doing harm. He was

upon motion requested to reduce his remarks to writing and refer them to the publishing committee.

The section of the state medicine and public hygiene was called, Dr. E. J. Ward, of Waxahachie, chairman. Dr. Cunningham, of Fort Worth, read a paper upon

“HOW TO OBTAIN A BOARD OF HEALTH SYSTEM FOR TEXAS.”

Assuming that the duties of the physician extend beyond that to the individual, he proceeded to show that with him lies the responsibility of properly presenting this question to the people and their legislators. That it was an economic question, could be shown by considering the loss by death every year to the state, to show which he quoted largely from the address of President Paine before the association in 1889, but the reader went further to show the immense loss by sickness which, when computed and added to the loss from deaths, raised the grand total into millions. “The state shows her high appreciation of the lives of her citizens by the large sums of money expended in her efforts to punish those who kill one of them. And right here it will not be amiss to point out a glaring inconsistency of the state. While she is spending thousands and thousands of dollars to convict and punish the man who has killed one of her citizens, perhaps a trifling vagabond, thousands of good citizens are dying all around from causes which could be prevented by wise and efficient sanitary laws which she has the constitutional power and right to enact: and still she sits unmoved and makes no sign. Oh, consistency, thou art a jewel!” This paper was very long, treating the subject carefully and fully. It was by motion referred to the publishing committee.

Wednesday, at 2:30 P. M., the section on gynæcology was called, Dr. H. K. Leake, of Dallas, chairman. His address, which was one of the most carefully prepared and probably the best received paper that was read before any of the sections, was on “Some common abuses in gynæcology.”

After quickly reviewing those themes which had formerly been dwelt upon in the opening address before this section, the paper proceeded to speak first of the “abuse of the local examination.” The impulse of that strong modern tendency toward accurate investigation of pathological conditions of the pelvic organs by touch and by mechanical means, (a department which it was shown had been developed in the hands of specialists among the Egyptians, and probably also among the Greeks and Romans, to disappear from the second to the beginning of the nineteenth century, and be revived by Recamier, 1801, and Bennett, 1843,) had, according to the writer, grown until it is often a matter of amazement with what

seeming disregard of the responsibility the practitioner, unsupported by his mature or conscientious judgment, precipitates the local examination upon the probably startled and half consenting judgment of the patient. More particularly does this action transcend our apprehension of its warrant when the latter is an unmarried female, perhaps not out of her teens, and it may be as yet insecurely grounded in that moral strength of character which age, education, and experience may effectually oppose to the sensual intimations of the growing mind. Under these circumstances, Goodell avers the physician to have committed "a moral rape," which has entailed not only shameful discredit upon an otherwise beneficent procedure, but, perhaps, left an irreparable hurt upon the future womanhood of the individual. Then having called attention to how slight and improperly considered symptoms were often made the grounds for examination and even surgical procedure, not only by the inexperienced practitioner, but also by the medical authority himself, the writer related three very striking and three very illustrative cases very much to the point, one of which is inserted as follows:

"A young lady of prominent social connections, while out horseback riding with a friend, was severely frightened and sprang from her horse to the ground, suffering immediate suppression of the menstrual flow. An experienced local physician of prominence, being called, made a local examination and diagnosed 'falling of the womb.'" "Now began," says this paper, "a vicious round of many kinds of pessaries and abdominal supporters, supplemented by a variety of vaginal injections answering to the fancy of several physicians, into whose charge she successively came. She was sent to me, a pitiable object of melancholia, muscular and nervous prostration from the moral and physical abuse to which she had been subjected by a long course of both misconceived and misapplied treatment. The positive diagnosis asserted by her former medical attendants and the presence of a pessary in the vagina needing attention, justified my resort to the local examination, which revealed much irritation from a badly designed and worse fitting instrument, that was quickly removed. Abdominal supporters and vaginal injections were alike discontinued. Moral influence and hæmatic and nerve tonics normally restored the deranged menstrual fluctuation. The nervous and muscular systems were soon righted, and reason followed by hope and confidence restored her once more to a grateful family, a large circle of friends, and to useful womanhood."

The advantages of a "reachable and seeable" method of examination was not denied, nor that too great care in avoiding this method has led to mistakes in diagnosis or to over-

looking the diagnosis entirely as in cases of atresia vaginæ, for instance, a remarkable case of which had been related by the author in which abdominal palpation alone revealed much, and yet, the question is asked, "May not a woman be the subject of disease outside of the pelvic organs?" How often have we seen amenorrhea, the natural consequence of tuberculosis, vigorously treated by local means to restore the flow? Is gastric derangement in a woman during the menstrual era of her life invariably caused by ovarian or uterine disease? Can she not be the subject of asthma or epilepsy from other causes than ovarian or uterine? As Goodell forcefully remarks: "These organs are too often made the scapegoat for headaches, nape-aches, spineaches, and for backaches, for weakness of vision, and also for a host of uterine symptoms, yet these very symptoms may be due wholly to mere exhaustion or mal-nutrition of nerve centers, and not reflex action or direct action from some real or supposed uterine disorder."

"Abuses of local applications" was next spoken of. Endocervicitis, first dwelt upon by Bennett, who treated five out of six cases of uterine disease for this trouble—an idea which has since been combated by all the more modern and advanced gynæcologists—still exists in the minds of a certain number of practitioners, who often, with the intention of treating "ulceration of the womb," direct much misapplied treatment to a little redness or discharge from the external os, when fortunately the most usual injury produced is a narrowing of the external os, giving rise to a pathological condition of the practitioner's own making. The attitude of the profession regarding applications to the endometrium varies all the way from the extreme views of Emmett, who has practically abandoned them, to those authorities who make them for the simplest leucorrheal discharge. Adopting a medium view, that certain forms of primary endometritis do occur, the reader proceeded to consider the abuse of local treatment as consisting not only in a character of agent but also in time and manner of the application. The strong caustics, nitric and chromic acids and zinc chloride, together with galvanic and thermo-cautery, when used often, keeping up a sloughing process, were condemned as prone to give rise to salpingitis and perimetritic inflammation. Milder measures were recommended in this, following the teachings of Wylie—avoiding the menstrual periods—and anticipating these applications by first relieving pelvic inflammations and uterine displacements. The hot water douche, that ordinarily so valuable agent recommended by Emmett, was shown to be abused in some cases. Usually sedative and contracting the pelvic vessels, in some chronic cases of uterine displacement the writer had seen it have the opposite effect.

and he agrees with Skeene that in marked pelvic peritonitis and in salpingitis he had seen it do harm, while in the single or newly married woman it is often unwarrantably prescribed for a slight inflammation which a mild saline with opiates by the rectum and rest in bed would entirely relieve without risking a shock to the vaginal sensibility by ordering the vaginal douche.

The abuse of the sound was next considered. The history of the introduction of the sound was traced, and the modifications which it has undergone in being transformed into the uterine probe. The dangers of its unskilful and indiscriminate use—not only in the hands of the young practitioner, but also when used by the specialist—were dwelt upon; and which are so evident that it was shown the tendency of modern practice is to discard it entirely. The injuries resulting therefrom are not usually fatal. Broca was quoted as recording the first fatal case, while since then a number have been placed on record. But a thoughtful article of Dr. Potter, of Buffalo, N.Y., was largely quoted to show how numerous and serious are these pathological conditions.

The author very correctly remarks that it would be interesting and instructive to know the exact proportion of pus tubes extirpated by Mr. Tait and others which owe their existence to this abuse.

As a repositor of uterine displacements the sound was condemned. In the hands of Thomas, Chrobak, and others it might be used without great risk, but as Grandin has shown, the large majority of practitioners will get better results by utilizing position and manipulation by the fingers; and where these do not suffice, the repositor of Elliot or Emmett. An especially criminal use of the sound is using it without the aid of antisepsis. This point was dwelt upon fully. The sound as drawn from the instrument bag, "that veritable mine of bacteriological wealth," if plunged into the uterus and turned about in the cavity denudes the wall in places and deposits the death-dealing seeds under the most favorable conditions for their development right at the opening of the fallopian tubes, resulting in possibilities of injury to the patient which are almost boundless. To sum up, he concluded by saying that if the sound was used with a disregard to any of the following precautions it should be considered an abuse:

"1. The sound is not to be passed immediately before or during an ordinary menstrual period.

"2. It is not to be passed in an acute inflammatory attack of the uterus, ovaries, pelvic peritoneum, or connective tissue.

"3. If passed at all in subacute or chronic inflammatory attacks of the same organs or tissues, this must be with due circumspection.

“4. It is not to be passed if the patient has missed a menstrual period. This is a safe rule, but admits of some exceptions, notwithstanding ‘Cameron had the handle of his sound constructed in the shape of a fœtus.’

“5. It is not to be passed unless itself, the vaginal walls, and cervix have been made thoroughly aseptic.”

Finally the reader had intended to discuss at length the “Surgical Abuses of Gynæcology,” “which, despite our manifold and obvious achievements, somewhat deform and hamper the progress of our art.” The abuse of the operation of trachelorrhaphy, of the curette, of divulsing the cervix (grounded according to Emmett on unsound pathology), of hysterectomy, which upon investigation might be found to have been done, “where no malignant disease was present,” and of “the fascinating operation of laparotomy with its special relation to removal of the tubes and ovaries, which might on critical examination be demonstrated to have its foundation on real facts much less often than justify our surgical emulation or our professional rivalry in resorting to it,” were all mentioned briefly, but the last occupied the remaining portion of this excellent paper.

That laparotomy had been in many cases “a veritable boon to suffering woman” was affirmed, but the opinion that there is no pelvic cellulitis aside from what is due to tubal or ovarian disease and only amenable to laparotomy was controverted. The author had “treated many cases of pelvic inflammation in all its various forms with marked deposits of exudate about the uterus, which have been permanently restored by a rational medical and local treatment carried out.” A letter from Dr. Thomas was quoted as saying in substance:

1. That while pelvic peritonitis and cellulitis very commonly, even usually, result from ovarian or tubal disease, they are not invariably so.

2. That pelvic cellulitis may exist independently of ovarian or tubal disease.

3. That they can be thoroughly eradicated by treatment early and systematically carried out; that after “formation of abscess, drainage and antiseptic washing usually prove curative.”

Dr. Engelman, of St. Louis, Dr. Dudley, of New York, and Dr. Grandin, were all quoted as entertaining the same views. Prof. Byford, of Chicago, says: “I wish to be put on record as saying, in reference to these cases, that many of them can be successfully treated by ordinary methods, and do not require to have the ovaries removed in order to relieve them.”

The “Shibboleth of the modern laparotomist, cystic ovaries” was discussed, citing the paper of Dr. McLean, of New York,

in which, supported by eminent authority, he fairly startled the profession by the statement that these so-called cysts are simply the Graafian vesicle, which has been caught in the act of ovulation, a physiological process, be it observed, which would continue, if not removed. "Now, truly, here is a sight," said Dr. Leake, "for gods and men to behold—important organs removed for no other offence than a due performance of a function imposed upon them by nature." In this statement those cysts of ovaries, independent of Graafian vesicular origin, are not included. Dr. Emmett was again quoted, that "many of the cases in which removal of the tubes and ovaries had been pronounced a necessity would get well without any treatment whatever at the hands of the physician; that Nature would sometimes cure a pyosalpinx as she would cure an ordinary abscess: that he had never sanctioned removal except for malignant disease or cyst."

The temerity with which the unskillful and inexperienced operator undertakes a laparotomy was deplored, and with good reason, as was shown; as was also the unbridled tendency toward the operation upon an insufficient and not carefully laid diagnosis. "The indications must be plainly apparent upon exhaustive physical examination, or, failing in this evidence, justified by a sufficient lapse of time to demonstrate incontestably the inutility of further waiting. As opposed to this dictum, the report of Dr. Miller of forty-two laparotomies among seventy-five abdominal sections for ovarian and tubal disease during one year, in Charleston, W. Va., a town of less than 5,000 population," was referred to. "We marvel not that one desires an analysis of the atmosphere of Charleston, which has been so productive of conditions for which this operation has furnished relief; yet prophylactic measures have been most strongly neglected." For these reasons and others not mentioned the reader predicted a coming reform in gynæcological surgery which, "when complete, will magnificently emphasize the wonderful resources of true art, and its inherent conservatism no less than its large conscience indissolubly linked with its scientific nature and grand achievements foreshadow grander possibilities."

Drs. Ghent, Rosser, Sears, and Gayle discussed this paper, and all agreed with the author and fully indorsed his views.

Dr. Gayle, who had just returned from Paris, said that he had heard precisely the same views expressed by Apostoli, and it gave him great pleasure to be greeted on returning to Texas by a paper which showed thought so thoroughly abreast of the most modern of European teachings. A vote of thanks was unanimously tendered Dr. Leake by the Section. There

were no other papers before the Section on Gynæcology, and the Section on Practice was called. A paper on "Malarial Hæmaturia," by Dr. Stephens, and one on "The Best Method of Using the Capsule," by Dr. Atchison, were read by caption.

Prof. H. A. West, of Galveston, read some

"CLINICAL NOTES ON MEDICAL CASES PRESENTED AT THE ST. MARY'S INFIRMARY AND SEALY HOSPITAL," GALVESTON, TEXAS.

The doctor began by explaining that in place of discussing any single subject, he had thought it might be profitable to recount the salient points in some interesting cases that were presented to the class at his clinic during the past session. He first urged the practical utility of a microscopic study of the blood in malarial fevers.

"1. As aid to the certain diagnosis of malarial fever.

"2. As to the type of fever in any individual case.

"3. As to the prognosis.

"4. As to the effect of remedies and the indications for their use."

He then proceeded to illustrate those points by cases. Galveston, he explained, is very free from the malarial poisons. Very few cases of malaria originate there, probably on account of the nature of the soil (chiefly sands), the free circulation of salt water just below the surface, the absence of stagnant pools, and the numerous strong currents of pure air from the gulf. The cases of malaria, which are nearly always in the hospital wards, are from the adjacent country, especially from the alluvial bottoms of the Brazos, Trinity, and Colorado rivers.

The first case, from Brazos county, was one of malarial anæmia, complicated with œdema of the feet and legs, without heart lesions, and urine free from albumen and casts.

Dr. Dock, the colleague of the reader, examined this patient's blood by the microscope, and found it to be thin, watery, and pale, the corpuscles numbering only 1732000 to the c. m., the plasmodium in abundance—this being the organism peculiar to the simplest form of intermittent fever. The indication was quinine, and the prognosis was a cure under its influence. "Here we had an ocular demonstration of the destructive effects of the organism upon the red blood cell, this accounting for the profound anæmia and resulting dropsy." The result of treatment was a cure in a few weeks.

Case two was an old man from Brazos bottom with chronic malarial poisoning, having at the time of admission a low grade

of fever without regular paroxysms, with a spleen slightly enlarged and general appearance of the malarial cachexia. Had been taking quinine and other chill medicines without any apparent effect. Microscopic examination showed the blood thin and watery (corpuscles not counted). The plasmodium common to simplest forms of intermittent fever not present, but the crescentic-shaped bodies characteristic of malarial cachexia in large quantities. Dr. Dock was of the opinion that this patient could not be cured by quinine alone, basing his belief mainly upon the presence of the crescents in the blood.

He was given the following:

R.	Acid arseniosi. ....	.....	gr. i.
	Chinoidin purif. ....	.....	5 ijss.
	Ferri sulphatis exsic. ....	.....	5 j.
	Ext. nux vom. ....	.....	grs. viiss.
	Aloin. ....	.....	grs. iii.
	M. Ft.—In caps, No. xxx.		
	Sig. One three times daily.		

The organisms disappeared from the blood, and patient was discharged cured in three months.

Case three, admitted November 18, aged forty, from Indian Territory, with chronic malarial cachexia: had lived in Brazos bottom; had had quotidian chills, which were at first controlled by quinine, but this eventually lost its effect: anæmia excessive; red blood corpuscles reduced to 2335000 to c. m. White corpuscles increased in the proportion of 1 to 100. There were numerous crescents present in the blood, but no plasmodium proper; was placed on same prescription as No. 2; improvement gradual. On January 1, organisms had disappeared from the blood: number of red blood cells had increased. He was discharged cured.

Case four, a German, admitted February 4: had had no chills recently, complexion sallow, complained of pains in limbs and a slight bronchitis. Diagnosis, epidemic influenza. Microscopic examination of the blood showed presence of plasmodium. A chill was then predicted, which occurred. Cured by quinine. The value of the microscope as an aid to diagnosis in these cases is nicely shown here, as also in determining the form of fever. It is important that the microscopic examination be made before quinine be given, as the administration of this alkaloid destroys the organism. Dr. Dock, the reader announced, was continuing his studies in this line, and would report his results in full at a later date.

The next subject discussed in this paper was typhoid fever (upon which Dr. West had presented an excellent paper at the session of the association in 1889). A year's observation has confirmed the views expressed at that time, and he presented

some statistical evidence bearing on the question. The official records of Galveston since April last show deaths from:

Typhoid fever.....	12
Continued fever.....	1
Typho-malarial fever.....	3
Gastro-enteritis.....	2
Gastro-intestinal fever.....	
Intestinal hemorrhage.....	2
Catarrh, and catarrhal fever.....	3
Gastric fever.....	1

Of the twelve cases not specifically reported as typhoid fever, he thought it safe to conclude that at least half should be so classed, making a mortality of eighteen for the year. Estimating the mortality rate at 10 per cent. which is very low (that of New York being 25 per cent), would give 180 cases for the year.

At the St. Mary's Infirmary in 1889 were admitted eight cases of typhoid fever, with three deaths, and eighteen cases of so-called simple continued fever: one autopsy showed characteristic lesions.

The city mortality records show following deaths in 1887:

From typhoid fever.....	10
From continued fever.....	8
From typho-malarial fever.....	2

IN 1888:

From typhoid fever.....	9
From continued fever.....	10
From typho-malarial fever.....	2
From catarrhal fever.....	1

He was of the opinion that those cases reported as continued, typho-malarial and catarrhal "should all be classified as deaths from typhoid fever." The statistics were of interest as showing greater prevalence of this fever than was generally believed, and though he had not had time to examine the records for a number of years, he expressed the belief that typhoid fever cases are on the increase.

The uncertainty regarding the diagnosis of these continued fevers was because of the difficulty in getting autopsies. (most of the cases being in private practice). It so happened that those who had been on the autopsy table were non-residents. Every effort was being made to obtain autopsies by which an accurate decision could be reached.

In regard to the cause of typhoid fever in Galveston, it was shown that many families used water from underground cisterns, which even if they did not leak were necessarily contaminated from a soil saturated with the soluble matters from adjacent privies. As the vaults of these privies are simply holes in the ground with open bottoms, through which the soil was continually being saturated with soluble fœces, every increase of population proportionally increased the danger.

There were also dairies in the thickly-settled portions of the city, where from crowding of animals closely together, filth and disease were necessarily produced. As to whether typhoid fever could be communicated from diseased cows, could not be definitely stated: but it could be conveyed in milk and dirty milk cans—the former probably diluted with, and the latter washed in, water from a shallow surface well, only a short distance away from a privy and receiving a perfect circulation from it.

Dr. West said he was interested in this question because certain of his colleagues and friends in Galveston doubted the origination of typhoid fever in that city, classing such cases as continued, catarrhal, and typho-malarial fevers or as gastro-enteritis, and was anxious to know the truth, that the evil might be recognized and the proper prevention applied.

The prospect of a rapid accession to the population of the city, with its attendant evils of crowding and filth production, renders the question of a better system of drainage and sewerage a most important one. Owing to the peculiar topographical relations of Galveston, the solution of this question is by no means easy. Situated upon a flat sand bank, with a very slight elevation above the sea level, the difficulties of even an adequate system of drainage are apparent. The natural drainage which heretofore existed having been interfered with by the filling of the streets and alleys, it is common after rains to find water standing in many low places, sometimes for days. The only remedy appears to be in the establishment and maintenance of a grade which would allow the surface water to run off. To arrest the gradual but increasing saturation of the soil by the present privy system, is a problem which the reader does not attempt at this time to solve, but that it is one to which the city authorities will be compelled to address themselves at no distant day. There can be no doubt, the increase of typhoid fever is the warning voice which must not remain unheeded.

The intellectual feast of the meeting was the ornate and eloquent address of the president, Dr. R. M. Swearingen, of Austin, which was delivered to a large and very appreciative audience on Wednesday evening. The orator was introduced by the first vice president, Dr. Sims, in a few happily chosen remarks.

In the selection of a subject for this address, he had borne in mind that it was by law of precedent to be upon some medical theme, yet to an audience of the profession and their friends, and of a character which would be of general interest. He had elected to depart somewhat from the usual field tilled by his predecessors, and spoke upon the "Natural Law of Conservation," which was defined "as that combination and systematic arrangement of forces and energies that maintains existence and perpetuates all things." Elaborating this theme

the speaker carried his hearers with him through an address of over an hour, in which every moment was enjoyed, and each individual of the audience regretted the close, feeling that they had reveled in a flow of elevated and polished human thought, and had imbibed therefrom a more chaste and enlightened conception of the grandeur and greatness of man's capabilities and destiny.

The larger part of Thursday was occupied by business of the association in executive session.

The Section on "Medical Jurisprudence, Psychology, and Chemistry" was called during forenoon, and Dr. Wallace, of Terrell, read portions of a paper on Psychology. The reader regretted the condition of neglect into which this important subject had been permitted to fall by the profession. He spoke, too, of the intimate connection between the physical and moral nature, of the interdependence of moral disease and physical disease, of the importance of the study of moral pathology. He discussed at length the influences which are largely accountable for mental derangements, speaking strongly against the crowding process to which the child is subjected in the schools of to-day, and concluding with a plea for a system of moral training which would teach the importance of doing "right for right's sake."

In the afternoon the section on practice was again called. The chairman, Dr. Ray, read an excellent paper on

MICROBES AND BACTERIA,

Treating the various micro-organisms in succession.

He favored the prevention of tuberculosis, and showed how it might be compassed. His paper was discussed by Dr. Sears, of Waco, who defended the microbe. Dr. Sears's view was combated by Drs. Terhune, Cain, West, and McLaughlin.

Dr. O. C. Smith, of Austin, read on the Curability of Phthisis, in which he deduced statistics to prove that phthisis is not entitled to be considered incurable. He urged the importance and efficacy of treatment at all stages.

The association then met in executive session, and the nominating committee reported the following officers for the ensuing year, who were forthwith inducted into office:

Dr. W. P. Burts, of Fort Worth, President.

Dr. J. M. Fort, of Paris, First Vice President.

Dr. M. D. Knox, of Hillsboro, Second Vice President.

Dr. W. W. Reeves, of Wills Point, Third Vice President.

Dr. F. E. Daniel, of Austin, Secretary.

Dr. J. E. Larendon, of Houston, Treasurer.

After a banquet on Thursday night and a short executive session on Friday morning, the association adjourned to meet at Waco, in April, 1891.

SCIENTIFIC PROCEEDINGS OF THE ACADEMY OF MEDICINE
AND SURGERY, RICHMOND, VA., MAY 27, 1890.

Reported by, J. W. HINSON, M. D.

EXHIBITION OF PATHOLOGICAL AND OTHER SPECIMENS.

Dr. Wm. W. Parker exhibited a specimen resembling wood coated with calcareous matter, the whole about the size of a bicuspid tooth. A child of ten had expelled it from the nose in the act of sneezing; its presence there had been known for seven years.

REPORTS OF CASES.

Unusual relation of pulse and temperature in malarial fever.—Dr. R. D. Garcin reported having observed in a case of malarial fever (in a girl of 18 years), one evening, a temperature of 101 deg., pulse being normal. He had given no heart sedatives.

Salol in Dysentery.—Dr. Aaron Jeffery having used salol in several cases of dysentery, reported very flattering results,

Having failed with the ordinary treatment of the disease, had ordered salol in powder, ten grains every three hours, with the result of disappearance of blood and mucus in about twenty-four hours.

Dr. Landon B. Edwards had been using salol in dysentery since attention had been called to its virtue by Dr. W. P. Nicolson, of Atlanta. He now preferred it to calomel and opium. He stated that the condition of pulse and temperature referred to by Dr. Garcin was common in malarial and typho-malarial fevers. Had observed in typho-malarial a pulse of sixty or sixty-five, while the temperature ranged from 101 deg. to 103 deg., probably being no higher from the effect of antifebriles. The condition of pulse was so peculiar as to suggest idiosyncrasy, but an examination after recovery discovered a normal rate.

SALINES IN PERITONITIS AND TYPHO-MALARIA.

Dr. Edwards called attention to the use of salines in peritonitis and typho-malarial fever. There had been hesitation and fear in regard to using the suggestion from lack of accuracy in differentiating typhoid and typho-malarial affections. He was confident that if this treatment were adopted, a decided inroad would be made in the direction of shortening the duration of typho-malarial fever. This idea was sustained by eminent authorities.

He had learned since, in correspondence with Dr. Joseph Price, that, in peritonitis and typho-malaria, the use of salines had become comparatively general in the north. He did not positively advocate this plan, but suggested it. Whereas a doctor would do well ordinarily to bring a case of typho-malaria

to a close in fifteen or twenty days, he had completed two cases in about eight days with the use of salines and such antipyretics as antifebrin, antipyrine, and quinine. Fluid diet was as essential as medicines. In using the antipyretics, he had guarded them with heart tonics, preferably strophanthus.

In reference to the abnormal relation of pulse and temperature, Dr. Parker had observed the pulse as low as thirty in some cases of typho-malaria.

Dr. O. A. Crenshaw stated, in reference to Dr. Edwards's remarks, that the treatment in 1845 was purgatives and venesection.

Dr. Edwards stated that salines were used not for their purgative but derivative effect.

Dr. Crenshaw believed that typho-malarial fever, so-called, was nothing but typhoid fever modified by malarial poison as a result of the unfortunate hygienic conditions in our cities. In typhoid fever no purgatives should be used. In typho-malarial fever, he followed the plan of purgatives in the beginning, and quinine.

ANTIPYRINE IN MALARIAL FEVER.

Dr. Garcin asked the experience of any present in the use of antipyrine in malarial fever. He had found that it only controlled temperature while being administered.

ANTIPYRINE IN TYPHOID FEVER.

Dr. Jeffery had found that in typhoid fever antipyrine reduced temperature for the first few days, but afterward had no effect. He thought the drug not only too depressing to be safe, but that it did great harm in suddenly reducing high temperature, thus obscuring the true nature of the disease.

Dr. T. J. Moore, in reference to the saline treatment suggested by Dr. Edwards, asked if the natural history of these diseases had not been overlooked. The history of typhoid and typho-malarial fevers showed that they would run their course. He would therefore suggest palliative treatment. Did not like to tamper with new remedies until they had been proved of value. When there was a tendency to ulceration of the bowel in typho-malarial fever the use of salines might set up a diarrhoea which it would be difficult to control. Quiet had been found very necessary in such conditions. In reference to peritonitis, salines might be resorted to where there was a pouring out of serum, but not genuine pus. Wegner, and one or two others, had recommended, where there was an exudation of bloody serum, but no true peritonitis, the use of salines to stimulate absorption.

Dr. Edwards feared he might have been misunderstood. Where there was decided typhoid fever or ulceration present,

he would not recommend salines, nor had he ever seen them recommended.

But in typho-malarial or bilious typhoid fever, the fever in which the leading element, bilious or malarial, as the case might be, was modified by a typhoid element (a furred tongue and constipated bowels distinguishing true typhoid), salines might be used.

SULPHONAL AS A HYPNOTIC.

Dr. Jeffery reported the case of a lady, who, after taking thirty grains of sulphonal, slept from 6 p. m., on Saturday, until 10 a. m., on Sunday; then, after an hour or two, for breakfast, again slept until 4 p. m., and again from supper until the following morning.

This was the only case in which he had observed such prolonged effect, although he had used the drug with success in various classes of wakefulness.

Dr. Crenshaw thought sulphonal an unreliable hypnotic.

Dr. Parker had seen one case in which it seemed depressing.

DIABETES

was the subject for the night. Dr. T. J. Moore had been appointed to discuss it, which he did, as follows:

“There are two conditions under which sugar exists in the urine, known as diabetes mellitus, and glycosuria. The first is characterized by the constant and persistent presence of sugar in greater or less quantities; the second is a transitory condition in which sugar makes its appearance for the time being, but will ultimately disappear. In the former condition, diet of a proper nature, and diet alone, will either greatly reduce the amount of sugar passed per day, or will cause it to disappear during the time the diet is continued, to return, however, when it is left off. As to causes in diabetes mellitus, heredity plays a conspicuous part, and it is liable to continue in the family for three or four generations. Mental emotions, nervous disturbances of all kinds, such as want, deprivation, exposure to cold, etc., may give rise to it. Any irritation affecting the floor of the fourth ventricle—central lesions and pathological changes in the vicinity of this region frequently cause it—such as tumors, serous effusion, hemorrhage, red and white softening, gummata, and interstitial changes of nervous matter. Gout, rheumatism, rheumatoid arthritis, pneumonia, typhoid and scarlet fevers, are all said at times to predispose to it, if not directly to induce it. Abstinence from animal and confinement to starchy foods is asserted by a certain class of authors to give genesis to it.

“The statistics will not sustain this declaration.

“Vegetarians and residents of hot climates, who subsist chiefly upon vegetable diet, are not specially prone to it.

“It is generally a disease of adult life, a limited percentage, however, occurring in children from five years upward.

“To enumerate the causes of glycosuria would necessitate repetition. Carbonic oxide, chloroform, ether, alcohol, strychnine, morphine, and the ingestion of large quantities of mineral acids, phosphoric especially, have been known to give rise to it. Uric acid in the gouty will likewise produce it.

“Anæmia following malaria, rheumatism, cholera, or prolonged lactation, has been known to cause it. Abnormal conditions of the digestive tract and congestion of the pancreas sometimes cause glycosuria. Overwork, anxiety, and morbid mental disturbance occasionally produce it.

“Women undergoing the change of life and broken down, aged people are liable to it.

“It is difficult to determine at first which of these conditions exists. In time the frequent examination of urine will alone solve the problem.

“Several of the conditions above enumerated as producing glycosuria will likewise produce diabetes mellitus.

“In the latter disease, the range of the thermometer is peculiarly interesting. It is quite often as low as 93 deg., more often 97 deg. and 97½ deg. The specific gravity of the urine is high, frequently ranging from 1.028 to 1.045.

“The diurnal quantity of urine ranges from 6 to 30 pints, with a general average of 6 to 12 pints, and of sugar from 3 ounces to ½ pound. Uric acid, hippuric and phosphoric, the lime and potash salts (oxalate of lime in particular), and albumen have all been found as accompaniments.

“The disease is an insidious one, often accidentally discovered in a general examination of urine.

“The impression is prevalent that in true diabetes the career of one so affected is necessarily short. Severe cases occurring in the weak, aged, or generally broken down, will average about two years. Under more favorable conditions the patient will live ten to twenty years.

“The appetite is voracious and difficult to satisfy. Thirst is continuous.

“As to morbid anatomy, the liver is most frequently congested without structural change. The kidneys are congested, punctated, and their epithelial cells fatty. The anatomical changes are confined to the convoluted portions of the tubules.

“The sacculated condition of the kidneys is an occasional accompaniment. The heart is usually feeble and there is an increase of the watery element of the blood, with decrease and disintegration of the red corpuscles.

“Reflex disturbances are prominent. Neuralgia in brachial, femoral, dorsal, epigastric, and other regions, is common. The skin is dry, harsh, and rough, with a yellowish tint. The mucous membranes are congested. The tongue is often red, streaked, and covered with thick, tenacious mucus.

“Sweating is common, with certain anatomical peculiarities. Often one side, a limb, the soles of the feet, or the palms of the hands will alone be affected. Œdema of the extremities toward the termination of the disease is quite common.

“Death is produced in various ways. Exhaustion and secondary lung complications are some of them, chronic pneumonia without tubercular deposit being a fertile source. They occasionally fall into coma and thus pass away.

“During the course of the disease, various skin eruptions make their appearance, often in groups. Lichens, impetigo, eczema, furuncles, carbuncles, and gangrene, are all found at times. When the latter appears, speedy death is almost inevitable. Gangrene of the lung occasionally carries off the patient.

“No satisfactory treatment has been discovered. The best results have been obtained from the treatment recommended by Dr. Banting for the reduction of obesity, with the addition of gluten biscuits, or those made from almond flour.

“It requires twenty-four to forty-eight hours first to find out by test the quantity of sugar in the urine.

“Then, having put patient upon the above diet, the urine should be examined in two weeks to observe progress.

“If the sugar be reduced one-half at the end of three or four months, moderate success is being obtained. As to medicines, opium has seemed beneficial. Its principle, codein, has been suggested.

“Mr. Ralph recommended the bi-meconate of morphia. It is best to use the drug tentatively. Instead of several times a day administer a fair dose at night, afterward increased if necessary.

“The opium habit is apparently not so liable to be contracted by these patients.

“Bromides and salicylates have also been used, and phosphorus when there is a nervous element, acids and pepsin when indigestion is present. Steam baths and hot douches are beneficial for their effect upon the skin.

“Whatever be the plan of treatment adopted, it will be likely to end in disappointment in most cases.

“Those improving rapidly and readily most probably have glycosuria, which will be relieved any way.

“As to physiology, it is supposed that some congestion or irritation of the liver either interferes with the action of the

cells, thus allowing the sugar to pass through unchanged, or else causes an overstimulation of said cells, resulting in overaction of the sugar-producing functions."

Dr. Crenshaw recommended Waukesha Springs for diabetes. Bishop of Canada, had been apparently cured, and many others greatly benefited by this water. Siluria and Bethesda waters were also used. He cited the case of a man in this city, who, though rejected twenty-five years ago by an insurance company on account of diabetes, was now living, thanks to Waukesha water. He had dieted himself very little in the meantime. Carlsbad water would probably benefit dyspeptic cases; opium, those in which brain symptoms were manifested. Did not believe, however, that true diabetes mellitus could be cured.

Dr. Edwards mentioned that Balmanno Squire, of England, had recommended phosphorus as a specific cure for diabetes. Squire had prescribed phosphorus for a skin eruption upon a patient who also had glycosuria. The effect was a cure of both. If there were any one remedy in the form of a drug, it would seem to be phosphorus. He thought the benefit from the various springs transient. Some years ago he had prescribed Buffalo Lithia for a Rev. Dr. Lee afflicted with glycosuria. He was apparently cured, but the trouble returned, and in order to gain benefit he was compelled to alternate between Buffalo Lithia, Alleghany, Blue Ridge, and Raleigh.

Mr. Hugh Blair believed, as to the water, that pure water was the secret of benefit; therefore suggested distilled water. Thought phosphorus would prove as ineffectual as all other drugs. Believed a young subject affected with diabetes mellitus would certainly die, an old one would probably prolong life by diet and other means until killed by some other disease. He related the case of a hospital patient who, not improving much, went to his work, and, though he was not cured, grew better from that time. He (Mr. Blair) would recommend employment. Would suggest in the way of food, wheaten bread cut very thin and toasted. Dextrine would not be so readily converted into sugar as starch. All the remedies that had been used appealed to the nervous system. Sugar in the urine was no proof of diseased kidney, but that organ would be injured by the long-continued passing of such quantities of water through it. Had known of a woman (diabetic all her life) passing as much as one and a half pounds of sugar per day. Referred to a man in this city, who, for twelve years, had been afflicted with diabetes. Six months ago he had been dieted, with the result of disappearance of sugar. He was now dying from effects of contracted kidney. Twelve years ago he had

received a great mental shock, which was probably the cause of the diabetic trouble. Though he now passed large quantities of urine, the specific gravity was low. This was one of the symptoms of contracted kidney, due directly, however, to the hypertrophied heart.

CORRESPONDENCE.

DISCUSSION ON INFLUENZA AT THE ROYAL SOCIETY OF PHYSICIANS OF BUDAPESTH.

At the meetings of the Royal Society of Physicians, of Budapesth, of the 25th January, the 1st and the 8th February, a discussion took place on the subject of influenza, which was opened by a lecture of Dr. Béla Augyan.

Dr. Augyan said, among many other things, that the influenza at Budapesth had set in with some sporadic cases about the middle of last December, that it assumed the epidemic character in the last week of that month, and had attacked half of the metropolitan population.

A latent stage in the disease could hardly be proven to exist, but, in most of the cases, suddenly attacked the individual with rigor, headache, muscular pains, and pains in the joints, and, after some hours, the disease with all its symptoms was developed. Also, in Budapesth, three forms of the influenza could be distinguished; the nervous, the catarrhal and the apathic form. The complex of symptoms, however, was quite different when complications occurred out of which the "angina catarrhalis," the pharyngitis and the laryngitis were the mildest ones. In some cases hæmoptysis without any material changes in the lungs had been observed, and the hæmoptysis was due to the hæmorrhagic infiltration of the laryngeal mucous membrane. Among the severe complications there was bronchitis, or bronchiolitis.

The severest complication was pneumonia, with a typical course. The question thus arose, whether there was a causal connection between these two infectious diseases, or whether we had to deal with a mere coincidence. Pneumonia and influenza are two independent affections, but this is no reason for stating positively, as Nothnagel did, that the relation of the diseases to each other is only an "external" one, and that we had to admit that the cocci of pneumonia in the catarrh of the respiratory apparatus due to influenza only found a favorable

soil for further development. Among the further complications there were exanthems (urticaria, herpes, erythema) and otitis media.

The epidemic, setting aside complications, in spite of relapses which had occurred in Budapesth, was mild. The therapy could invariably only be a symptomatic one.

Prof. Stiller differed from his predecessor in certain respects.

According to Dr. Augyan, the whole disease only referred to the stage of fever, and all that followed was looked upon as being mere complication. The lecturer divided the affection into two distinct stages, viz.: into the stage of invasion of fever, which lasted from two to three days, and the second stage, which was, in most cases, apyretic, which lasted about a week, and was frequently more disagreeable to the patient than the invasion of the fever.

What happened in this second stage was not a mere hazard or complication, though complications were also observed, but it was an essential part of the influenza, the direct result of the poison of the disease. In very mild cases, this stage was disguised to such a degree that it had the appearance of being convalescence. The type of the disease became manifested in only the particularly pronounced stage of the fever, and in about three-quarters of the cases it was only observed in the second stage. It was only in this stage that the physiognomy of the disease was fully developed.

The lecturer only recognized two forms, the catarrhal and the gastro-intestinal. As to the so-called nervous form, it had, in his opinion, to be divided into two distinct forms, viz.: the neuralgic, which, after the catarrhal one, was the most frequent, and manifested itself in various neuralgias, particularly those of the fifth nerve, which could be protracted for several weeks. The other part was the adynamic form, which was characterized by weakness of heart, cerebral anæmia, giddiness, and faintness.

Touching the question as to what were the causes for these different forms of the disease, the lecturer said that they were only due to the constitution of the patient. The influenza presented more striking polymorphism than was observed in any other infectious disease. Out of two cases which Professor Stiller had seen on one day, one presented in the beginning the symptoms of acute cerebro-spinal meningitis, and the other that of croupous pneumonia. In one case which he had recently seen, catarrhs first appeared under the influence of the influenza: later on, inframaxillary neuralgia came on, from

which the patient had suffered three years before; then severe cardialgias, which used to occur formerly only once or twice a year; finally paratyphlitis developed.

As to the catarrhal forms, Professor Stiller observed some occasional symptoms, such as epistaxis, œdematous pharyngitis, and, frequently, imminent inflammations of the larynx.

The pneumonias played the most important part. Most of them were undoubtedly the result of bronchiolitis, hence broncho-pneumonia. The lecturer also saw several cases of a lobular character without any trace of bronchitis, which were thus due to the direct influence of the virus. In the case of influenza also common pneumonia used to occur in a great number. These were in part lobar, and in part lobular, and all of them were characterized by the particular symptoms described in the cases of pneumonia following on influenza. Professor Stiller ventured to consider this as being the fifth form of the influenza, viz., the pneumonic one. He is also of the opinion that pneumonia could be produced by various microbes, and that their character depended thereupon. For illustration, he cited a case of pneumonia which he had observed: the pneumonia had a malaric character and the tertiary type; the infiltration appeared and disappeared together with the attack of the intermittent fever.

The neuralgic form was characterized by continual neuralgias of particularly some branches of the fifth nerve and the intercostal nerves. The neuralgias occasionally supervened in a typical form. The infraorbital nerve was proportionately very frequently attacked.

The gastro-intestinal form appeared in two types: in the atonic form with absolute anorexia and disturbances of digestion. The gastric form was characterized by complete intolerance against food, vomiting of any food which was taken, and hæmatamesis. Warm poultices and alcoholics were not supported in this form. Icterus was observed on one occasion.

The adynamic type was characterized by severe prostration, weak action of the heart, cerebral anæmia, and fainting fits. In conformity with the statements of Professor Augyan and in contrast with those of Koranyi, he could observe swelling of the spleen in only a few cases.

CONTRIBUTIONS TO THE KNOWLEDGE OF THE SO-CALLED WEIL'S DISEASE.

Dr. Sumbera, of Prague, has recently furnished some interesting details about this disease. Taking into account the cases of Weil's disease which had been observed during the last year at the clinic of Prof. Eiselt, which had taken a fatal

course, and on which post-mortem examination was performed, Dr. Sumbera, in conformity with the statements of Wassilieff, arrives at the following conclusions: In various regions of Europe there was an infection, which in most of cases occurred in a sporadic way, and occasionally also in small epidemics. The affection was associated with striking nervous symptoms, tumor of the spleen, enlargement of the liver, and pathological disturbances of the functions of the kidney, Icterus was constantly present; the disease was, moreover, characterized by intense pains of the muscles and albuminuria. The affection occurred much more frequently in the juvenile age. It particularly occurred during the months of summer, and, in the majority of cases, recovery takes place. In the last mentioned cases, the affection appeared to be concluded within about eleven days. In the severe cases a secondary augmentation of temperature was observed.

Fatal issue was proportionately rare.

In the fatal cases, acute parenchymatous inflammations of the interior organs, and particularly the kidneys, as well as acute interstitial inflammations of the liver, the lungs, and the kidneys, were observed. The disease now described frequently resembled the bilious typhoid fever, which occurred endemically in Egypt and Smyrna. This represented a disease *sui generis*, which had nothing to do with the *febris recurrens biliosa*.

PROSTATECTOMIA LATERALIS.

At a recent meeting of the Imperial Royal Society of Physicians, of Vienna, Prof. v. Dittel read an interesting paper on "Prostatectomia lateralis." The application of the catheter and puncture of the bladder were only palliative remedies for removing retention of urine in the case of prostatic hypertrophy. It was thus natural that surgeons were seeking for a procedure which should bring radical help; to these procedures belonged the experiments of dilatation by Civiale, and partial resection by means of the "seateur" of Mercier. All these methods, however, were attended with only an imperfect success. In the antiseptic era, McGill performed the suprapubic section and extirpated the middle lobe — as he believed — of the prostate, which was covering the neck of the bladder. He obtained good success in five cases out of six. Also Kümme, of Hamburg, had reported on six similar cases of operation, out of which three had to be looked upon as being healed. There were, however, also a great number of bad results. The lecturer himself had carried out the same operation five times, and obtained a success on two occasions. He could not, however, observe a permanent success. The obstacle for the dis-

charge of the urine, in the opinion of Professor Dittel, was not the hypertrophy of the middle lobe of the prostatic gland — as was formerly supposed — but it was the hypertrophy of the lateral lobes. M. Schmidt, of Cuxhaven, was of the same opinion. The lecturer thus conceived the idea of producing a free evacuation of the urine by removing from the prostatic gland as much that only the urinary ducts remained behind. In experiments on the cadaver, Prof. v. Dittel could obtain the conviction that the free outflow of the urine from the filled bladder was, indeed, hindered by the lateral lobes of the prostatic gland, and he therefore carried out *prostatectomia lateralis* on the cadaver in the following way: An incision was practised from the *os coccygis* as far as the sphincter ani, and round this as far as the *rhaphe* of the perineum. After penetrating into the ischio-rectal pouch, the vessels were first ligatured.

Before the proper extirpation of the prostatic gland, an aseptic catheter was introduced into the bladder, and fastened there. A tampon was also introduced into the rectum, above of the prostatic gland, so that they could well control the position of the urethra and the rectum, and a lesion of these organs could be avoided. Taking into account the above mentioned facts, the prostatic gland could then be removed like a tumor. After the operation had been concluded, the cavity was filled with iodiform-gauze, and healing occurred through the formation of granulations.

Prof. Dittel believed that the same method was appropriate for the operation of purulent spermatocystis and tuberculosis of the *vesicula seminalis*, and, finally, for total extirpation of the prostatic glands.

The results obtained heretofore in total extirpation of the prostatic gland after suprapubic section had not been very favorable. Out of the nine cases published hitherto, only three were attended with temporary success. In one case, that of Leissrink, the patient died thirteen days after operation, and in two cases of Czerny, one patient died after twelve days and another after long illness.

Prof. v. Mosevig remarked that he had carried out several experiments to treat hypertrophy of the prostatic gland with parenchymatous injections. As tincture of iodine proved to be too irritating, he chose a solution of iodiform ether, which, after thorough antiseptic clearing of the wall of the rectum, he injected into the prostatic gland by means of Pravaz syringe. He repeated the injections after from five to seven days after alternately injecting into the right or the left lobe. The patients thus healed could micturate spontaneously after three weeks.

Docens Dr. Ullman mentioned that he had availed himself of the method referred to by Prof. v. Dittel in the extirpation of tuberculous vesiculæ seminales.

Prof. Billroth remarked that he could not hitherto decide to undertake total extirpation of the hypertrophied prostatic gland, as he was afraid of subsequent thrombosis of the veins.

The injection method would perhaps furnish good results in the future, when a convenient fluid for injection will have been devised.

GARCIA DE ORTA.

The ex-rector of the Vienna University, our most distinguished pharmacologist "Hofrath" Professor Augustus Vogl, has recently, in an inaugural address, given very interesting and important historical details dealing with the origin and the development of pharmacology. Professor Vogl points out that as to our knowledge of the drugs of India and the pharmacognosia in general, they were vastly due to the great merits of a Portuguese physician named Garcia de Orta. He had reported upon his vast experience, observations referring to Indian drugs in a great work. We knew but little of the biography of this distinguished man, and what we knew we learned from the work which he left to his posterity. He studied natural science and medicine at the Spanish universities of Salamanca and Alcalá, and was later on a teacher in the University of Lisbon. At a later date he went to Goa, in India, in the capacity of a physician of the Royal Hospital. There Garcia de Orta enjoyed great esteem with the Indian government, as well as with the princes of the Hindu. In that country he also acquired a great fortune, which he used for undertaking new studies and investigations. His work appeared in 1563 in the form of dialogues and in the Portuguese tongue. Soon afterward his work appeared in a Latin edition, where the dialogical form was, however, abandoned, and which was supplied with numerous commentaries and explanations. The work was, however, also translated into Italian, French, and English, and thus Garcia's work obtained a high reputation also beyond the limits of his country. Many of the drugs on which Garcia in his work gave excellent details, as to their origin, properties, etc., still formed an important part of our modern pharmacology.

Out of the many drugs which are contained in Garcia's work, Prof. Vogl cites some on which Garcia had already given exact details as to their therapeutic use. Thus he reports on several sorts of "aloe, opium, benzoe," tamarind, cinnamon, etc., of which he gives valuable details. Prof. Vogl concludes by saying that though many a false statement

may be found in Garcia's work, it nevertheless represented a prominent work as to the history of Indian drugs. Prof. Vogl's work contains many more interesting historical dates, and represents a most valuable contribution to the history of pharmacology and pharmacognosia.

THE ELECTRO-THERAPY OF ATROPHY OF THE OPTIC NERVE.

Dr. M. Weiss, of Vienna, states that he treats chronic non-inflammatory affections of the optic nerve with galvanic currents of an average intensity of two milli-ampères, which he sends from the closed eye as far as the occiput in an interval of fifteen to thirty minutes. Change of the current at each from five to ten minutes. The treatment must be practised each week from five to six times, and in the non-quite severe cases of tabetic atrophy of the optic nerve a slight improvement could be noted already after two months. In severe cases of tabetic atrophy of the optic nerve the author, besides the galvanic method, also used the episcleal faradic irritation after previous cocainization of the conjunctiva, to the effect of ultimately irritating the "rectus internus" and the "rectus externus" muscles to contractions, and he thus obtained a slight stretching of the optic nerve.

ON THE USE OF HYDRACETIN AGAINST PSORIASIS.

Dr. E. Basch, of Budapesth, Hungary, reports upon the use of hydracetic in the Hungarian Medical Journal, "*Gyógyászat*."

Dr. E. Basch has performed control experiments with hydracetic against psoriasis, which had first been recommended by R. Guttman and Oesterreicher for this purpose. He could only in part confirm the results obtained by these authors. The hydracetic, even when used externally, proved to be a strong poison, whose influence occasionally threatened life. The author cited a case in which the hydracetic was used in "psoriasis universalis dispersa." For reasons of precaution only the third part of the body was rubbed with a 10 per cent hydracetic salve, and after ten days' use the salve produced symptoms of poisoning of such an intensity that the drug had to be discontinued. The influence of the hydracetic, before all, became manifested by a striking paleness of the skin and the mucous membranes, after which hæmoglobinuria and, finally, hæmatogenic icterus came on. Moreover, in contrast with the statements of Guttman, the author observed a striking acceleration of the pulse from 80 to 120 beats "per minute." The "plagues" of the psoriasis, however, did not disappear in spite of the symptoms now referred to, which

threatened the organism to a most high degree; the plagues only became more pale; they, however, assumed their typical appearance again when the poisoning symptoms disappeared. Dr. Basch used the hydracetin in four other cases and could obtain the conviction that the hydracetin could not be compared, as to its prompt effect, with the pyrogallos or chrysarobin. From the observations it became evident that the hydracetin, whose reducing properties were beyond any doubt, had no specific properties against psoriasis, such as pyrogallos and chrysarobin. Dr. Basch thus recommended the drug only for those cases where the plagues were limited to single parts of the body and to a small extent.

GENERAL NEWS.

The First Female Physician in Austria.

The emperor of Austria has authorized a certain lady doctor, named Rosa Kerschbaumer, to exert medical practice and to manage a sanatorium for eye diseases in Austria. Dr. Rosa Kerschbaumer is a Russian by birth, and her father was physician in ordinary to the late czar. She was one of the first ladies who studied at Bern, in Switzerland, and took there the M. D. degree. In Vienna she became acquainted with Dr. Kerschbaumer, assistant of the late Prof. Arlts, and married him. At Salzburg they have created a maison de santé, and exerted common medical practice there.

Austria is still belonging to those few countries in which the exertion of the medical practice is prohibited to ladies.

According to the *Neues Wiener Tagblatt* the lot of the female physicians in Germany is a better one, as in Berlin is a policlinic, which is under the direction of two lady doctors, viz.: Dr. Tiburtius and Dr. Lehmus. In Frankfort-on-the-Main there is one female practitioner. In London, seventy lady doctors; in Edinburgh, five; in Dublin, two; and in Italy, six were practising medicine.

In Turino a lady doctor is physician in ordinary of the queen of Italy. Also the Queen Elizabeth, of Roumania, has a female physician in ordinary.

In the United States 3,000 ladies exerted medical practice.

Dr. Kerschbaumer has on various occasions pleaded in favor of the lady doctors being permitted to exert medical practice in Austria, and has written several respective pamphlets.

Vienna, May 30, 1890.

PHYSICIANS' MUTUAL BENEFIT ASSOCIATION.

Editor New Orleans Medical and Surgical Journal :

DEAR DOCTOR—You have in the past accorded me many privileges of a similar character: will you not kindly grant me this one also? Please publish in your journal the following receipt and letter, with the accompanying remarks, which I can not doubt after reading you will believe to be of some interest to the physicians of our state:

“GRAND COTEAU, La., May 16, 1890.

“Received of Dr. Richard H. Day, President of the Physicians' Mutual Benevolent Association, ninety-nine dollars (\$99), amount of benevolent fund coming to me as widow and legal heir of Dr. C. P. Smith, deceased.

“[Signed]

ELLA M. SMITH.”

“GRAND COTEAU, La., May 16, 1890.

“*Dr. Richard C. Day:* KIND FRIEND—Your kind favor of the 13th received. Many, many kind thanks for the assistance you have given me. It is certainly appreciated, and I pray that untold blessings may be showered upon you in return. Often will I think of your kind words of sympathy to one whose heart is bleeding; they are a soothing balm, and though a stranger to me, you have proved a friend in need.

“In the name of our dear departed, let me offer you the gratitude of his widow and orphans.

“Respectfully,

“[Signed]

ELLA M. SMITH.”

BROTHER PHYSICIANS: The death of our late brother, Dr. C. P. Smith, of Grand Coteau, La., necessitates the collection of another beneficiary assessment, to meet the demise that may next occur among our membership. It may be you, my dear brother, or it may be myself; but in any event, it is our sacred duty to contribute to this noble benevolence, and thus demonstrate our kindly and brotherly feelings toward our fellow-physicians and their families. Brother members, let us pay up our assessment promptly, and do it cheerfully.

While thus appealing to our members for the prompt payment of their assessment, may I not use the occasion to appeal once more to the physicians of our own and sister states to give this matter their serious thought, and no longer display such culpable indifference toward this, the noblest and grandest benevolence in the world?

Is it possible that the physicians of our state are so poor, or worse, so selfish, that they will not give \$3 to the bereaved widows and orphans of our brother physicians when they are called away from our common field of labor?

It is a farce and a mockery to meet and pass resolutions of our high respect to the memory of departed brothers, and of our deep sympathy and condolence for their widows and orphans, and withhold the trifling sum of \$3 for their material relief and comfort.

My dear doctor and brother of the noble and divine profession of medicine; you, into whose hands these few lines may fall, read the letter of Mrs. Ella M. Smith, the poor, heart-stricken widow of our departed brother, Dr. C. P. Smith, and note the warm gratitude expressed, and the great relief which even this small amount afforded in her sad hour of deep distress, and let it arouse you and me from our lethargy and selfishness, and cause us to redouble our efforts and activity to make our Mutual Benevolent Society a greater blessing to the widows and orphans of our profession, in the extension of larger amounts of benefits, augmenting our meagre hundred into thousands of dollars to be dispensed to them.

To accomplish this, we must have more members—working, earnest members. Will you not join in with us to achieve this grand result. “Come thou with us, and we will do thee good.”

All remittances and applications must be addressed to Dr. Richard H. Day, President Physicians' Mutual Benevolent Association, Baton Rouge, La.

SHREVEPORT MEDICAL SOCIETY AND MEDICAL PRACTICE BILL.

The Shreveport Medical Society, as shown by the records, was organized in 1866, and continued with varying fortunes till about 1869 or 1870, when it struck a snag—the fee bill—the same obstruction that has wrecked so many good medical societies, and for a time it sank into the slough of neglect, and there remained till the early part of 1876, when it was resurrected and reorganized. With this new start, profiting perhaps by experience and the accumulated wisdom that results therefrom, the question of a fee bill has not again entered as a factor in its polity, and as a result we have made good and substantial progress. With an occasional exception, the society has had regular meetings every month, and we feel assured

that through the influence of this sort of socio-professional intercourse the profession in our city has been greatly strengthened and advanced; and I am sure I speak advisedly when I say that no community of this size can boast of a more harmonious or more coöperative body of physicians.

It was the Shreveport Medical Society that started the movement that led to the reorganization of the State Medical Society in 1878, and to this body she has had the honor to furnish two of its presidents. But it is not my purpose to regale you with a history of our achievements or claims to distinction. In lieu thereof I will submit our epitome of late proceedings touching the bill to regulate the practice of medicine, etc., in Louisiana.

The first copy of this act was received in Shreveport some time during the first week in June. Its appearance excited a good deal of interest among the medical men of this city, and various opinions pro and con were expressed. To the minds of some, and among them several of our leading practitioners, its language seemed ambiguous, and an impression gained that, as worded, the act might be construed as retroactive in its operation, besides containing some other more patent defects. A special called meeting was convened and largely attended, and after considerable discussion resolutions were adopted in opposition to the bill in its entirety, but with a large minority dissenting. On this vote the ayes and noes were recorded on the demand of those voting in the negative. The corresponding secretary was instructed to transmit to our representatives and others in the legislature the action of the society, and to request them to use their influence to defeat the bill. Before the secretary had time to discharge this duty, however, the opponents of the bill reconsidered their action and called a second meeting, which was held on June 9, and the following—a sort of compromise—was adopted:

Resolved, That the act to regulate the practice of medicine in Louisiana, and now pending before the legislature, be approved, with the following proposed amendments:

1. That section three (3) be so amended as to provide for the appointment of five (5) boards of examiners—one for the city of New Orleans and one each for the four congressional districts outside of the city of New Orleans, each board to consist of three (3) graduated physicians, whose duty it shall be to examine all applicants in their respective districts under the provisions of this act.

2. That section four (4) be amended by striking out the

words "two members of the board" and substituting the words "one member of the board in the territory of which the applicant seeks to locate."

3. That section twelve (12) be so amended as to subject all midwives offering as professionals to practise obstetrics in this state to the examination and approval of a board.

4. That this act as amended shall not be construed as to apply to practitioners of medicine, surgery, and midwifery, who previous to its passage shall have complied with the requirements of the present law regulating the practice of medicine, etc., in this state.

These recommendations were duly forwarded to our legislators.

As an earnest advocate of the bill as originally formulated, with perhaps a single objection, viz: the exemption of professional mediums from its provisions, I suppose I may say that to my mind it is clear that the proposed bill to create five boards, aggregating fifteen members, will be attended with far greater expense, and in the end prove far more complicated, and in every way more unsatisfactory than the plan proposed in the act; and I have reason to believe that such is beginning to be the opinion of those among us who actively supported the amendments, above detailed,

My further opinion is, that the interjection of these changes at this late hour will tend to defeat legislative action altogether at this session of the legislature.

In view, however, of the fact that the profession throughout the State, has not had an opportunity to ponder upon the questions involved, and especially since our State society has not passed upon the merits of the act and given it the force of its endorsement, I think it would be well to postpone further action in the premises, if at this juncture it can be done, and permit the whole matter to rest, so far as legislation is concerned, till the next meeting of the General Assembly; and especially am I moved to this conclusion, in consideration of the present excited state of the legislative mind on the lottery question. I believe in this I reflect the feeling of the Shreveport Medical Society.

A. A. L.

EDITORIAL ARTICLES.

OUR QUARANTINE SERVICE.

On May 31, 1890, the members of the State Board of Health, accompanied by a large number of invited guests, among whom was a representative of *THE JOURNAL*, made an annual inspection of the quarantine service. These annual inspections have been of vast educational importance ever since Dr. Jos. Holt, when president of the Board, invited delegates from all of the gulf states and Tennessee to examine the workings of the new system of maritime sanitation which had been devised by him, and which even now, though greatly improved, bears the name of the "Holt System." The first of these inspections on a large scale was made in 1885. In that year the old method had already been discarded and a gigantic stride been made toward placing the system on an exact scientific basis. Such a complex and comprehensive system could not spring into perfect life in a day. Its infancy was marked by a number of imperfections, which, however, were corrected in time. Each year witnessed some advance, some improvement in the disinfecting apparatus which increased the efficiency of the system and rendered still narrower the margin of uncertainty. When Dr. Holt retired from the presidency of the Board, it was thought on all sides that the system was incapable of further improvement: but during the administration of his successor, Dr. C. P. Wilkinson, the panel-chambers were discarded in favor of long metallic cylinders, in which an increase of internal pressure could be obtained. This feature was the product of the combined thought of Dr. Wilkinson, Dr. T. Y. Aby, Quarantine Physician, and Dr. J. J. Kinyoun, Bacteriologist of the Marine Hospital Service. The last step has been made very recently: this is the almost complete consumption of the oxygen of the air drawn into the sulphur retorts. Formerly the sulphur combined with only about 4 or 5 per cent of the oxygen; now 16 per cent is consumed. When we bear in mind that oxygen composes only 20 per cent of the atmospheric air, we can readily understand how much the germi-

cidal power of the fumes is strengthened and the efficiency of the system increased. The method of obtaining this increased saturation is fully described in Dr. Olliphant's article in this number, to which we call the attention of our readers. Dr. Olliphant paints very clearly the present status of our quarantine methods with all of the improvements.

We spoke of "narrowing the margin of uncertainty." Without exactness there is no science. While it was acknowledged that the Holt system was far superior to other methods of maritime sanitation, still there was lacking a positive demonstration of the power of the process to destroy the low vegetable forms, among which are classed the organisms that are the causative agents of epidemic diseases. In a disease like anthrax, it is not a difficult matter to test the efficacy of certain germicides, because the bacillus is a familiar object, is easily recognized, and is the undoubted *materies morbi*; but in yellow fever the demonstration can not be made as satisfactorily, because the germ of the disease has not yet been recognized or isolated. There is, however, one valuable method by which we may with a reasonable degree of certainty determine if a given process will destroy the virus of yellow fever: we mean analogy. All that we know of yellow fever leads us to believe that it is due to a living organism, which is subject to the same laws as other low forms of life, and which can be destroyed by the same agents.

At the request of Dr. C. P. Wilkinson, the then president of the Board, Dr. J. J. Kinyoun, of the Marine Hospital Service, was detailed in May, 1888, to make a bacteriological study of the methods used at the Louisiana quarantine station. His report was able and conscientious. (See *Weekly Abstracts of Sanitary Reports*, vol. iii, No. 26, June 29, 1888.) In his report he gives a description of the workings of the system as it existed at that time. This description, together with the wood cuts, was taken from Dr. Holt's pamphlet. His own studies include experiments with spirillum cholerae Asiaticæ, spirillum Finckleri, bacillus anthracis, bacillus typhi abdominalis, bacillus coli communis (Hueppe), bacillus muris septicus, bacillus pneumoniae (Friedlander), bacterium of yellow fever (?), or micrococcus Finlaygensis (Sternberg), staphylo-

coccus pyogenes albus, staphylococcus pyogenes aureus, and streptococcus erysipelatis.

A large number of cultivation tubes were prepared, containing blood-serum, peptone-gelatine, agar-agar, and rags. These tubes were inoculated with pure cultures of the micro-organisms above named, and placed in the heating chamber of the quarantine station. After being subjected to the heat ordinarily employed in the course of disinfection of clothing, etc., and for the usual length of time, they were removed and kept under observation, to see whether the organisms were destroyed or not. In addition to the above organisms, a specimen of a micro-organism was experimented with that was claimed by Dr. Carlos Finlay, of Havana, to be the cause of yellow fever; and another specimen was obtained from Dr. S. T. Armstrong, who had received it a few days before from Dr. Finlay himself. [This micro-organism has been called by Sternberg the *Micrococcus Finlayensis*. Since the publication of the above report, Kinyoun has shown that the *Mi. Finlayensis* is not the causative agent in yellow fever, inasmuch as "experiments" made on various animals give no results. Later, while the observations on malarial fever were under way, this organism was discovered upon the skin of a majority of the patients suffering from malarial fevers, the patients hailing from Portland, Me., to Vera Cruz, Mexico. (Marine Hospital Service Report, 1889.)]

Eight experiments were made with the dry and moist heat. The experiments were varied; sometimes a wire basket, containing from four to eight tubes inoculated with various cultures, was placed in different parts of the heating apparatus. Cultures that were not surrounded by clothing, etc., were all killed; but when placed in a mattress or some other fabric, some of the organisms were found to survive the heat. This was notably the case with bacillus anthracis and the so-called bacterium of yellow fever (*Micrococcus Finlayensis*). While some of the tests failed to give results as gratifying as we might wish, still the one fact remains that the heat obtained, when allowed to act on the organisms, was sufficient to destroy them. The question of the heat penetrating mattresses, etc., has, we venture to believe, been already solved. These experi-

ments, it must be remembered, were made with the old imperfect apparatus; now a new appliance is in use, which renders a temperature (moist) of 234° , and *under increased pressure*. This great improvement, we hasten to say, is largely due to Dr. Kinyoun himself, who suggested various changes to Dr. Wilkinson and Dr. Aby.

With this improved apparatus we feel that a new set of bacteriological experiments would give even more satisfactory results than those already obtained.

Thirteen experiments were made to test the efficacy of the fumigation with sulphur dioxide. The quantity of sulphur used in the fumigation of the vessels observed by Kinyoun varied from 100 to 400 pounds, according to the size of the vessels. "About 100 pounds are consumed in an hour, and forms about 1,170 cubic feet of sulphur dioxide. If, as is claimed, 180,000 cubic feet of air per hour be driven into the hold or compartment of a vessel, the strength of the gas would be, approximately, six-tenths per cent."

The experiments were so varied as to place the cultivations in all positions in which infections might be found in the hold of a vessel. The germicidal power of air containing only six-tenths per cent of sulphur dioxide is very slight. In the M. H. S. Report, 1889, Kinyoun remarks: "As low a percentage as two volumes [of SO_2] was found sufficient to destroy the vitality of the principal non-sporebearing pathogenic micro-organisms, cholera-spirillum offering the least resistance. Ten per cent of sulphur dioxide was found to be a good working quantity for all substances." Nowadays, instead of blowing air containing only six-tenths per cent of sulphur dioxide into the hold of a vessel, the fan blows air containing not less than fifteen per cent; sometimes the proportion is greater, but never less.

In Kinyoun's experiments, the sulphur dioxide failed to kill all of the pathogenic germs exposed to its influence. It would be highly interesting to have the experiments repeated with the present improved fumigating apparatus.

Any suggestions from an impartial and competent critic like Dr. Kinyoun would be certain to obtain a respectful hearing from enlightened and progressive men. He says: "In the

evolution of such an establishment, the many difficulties that must have stood in the way of such an undertaking, due credit must be given to those gentlemen who formulated the theory and put in practical operation the present system of disinfection. From the series of observations made in determining the temperature of the chamber for the application of dry and moist heat, it is clearly shown that the time prescribed is entirely too short when the chamber is filled with goods; more especially is this noticed when the chamber is filled with such goods as blankets, mattresses, and cushions. Unless a longer period of time is given to each charge, it is certain that only a partial disinfection is accomplished." We take pleasure in stating our firm belief that this weak spot in our system, revealed by scientific study, has been effectually repaired by discarding the apparatus formerly used, and employing one suggested by Kinyoun himself. He further says: "It was suggested to Drs. Wilkinson and Aby that the defects of the present steaming apparatus could be best overcome by adopting the application of dry and moist heat under a pressure of from ten to twenty pounds. To accomplish this it would be necessary to have new machinery. Instead of the steaming chamber now in use, to have constructed a large chamber of boiler iron, capable of standing at least twenty-five pounds pressure to the square inch, and provided with one bulkhead door that could be properly secured to make it steam tight, being provided with suitable appliances for ascertaining the temperature in any part of the chamber. In this manner, the disinfection by steam and dry heat could be thoroughly accomplished and much more speedily than at present."

The value of these suggestions was at once apparent to the Board of Health, and no time was lost in putting up the present efficient heating apparatus.

Kinyoun's experiments showed that there were imperfections in that which we had almost deemed perfect; two years have elapsed since, and the defects are, we feel confident, fully repaired.

Our feeling of confidence, however, is not a scientific demonstration. Nothing but a bacteriological investigation can fully establish the fact that our system of maritime sanitation

destroys pathogenic organisms, no matter under what circumstances they may present themselves. We trust that the present Board of Health will avail itself of the argument which bacteriology offers it in order to place the effectiveness of our quarantine methods beyond even the suspicion of doubt.

PASSED ASSISTANT SURGEON S. T. ARMSTRONG.

Owing to the unexpected and unjust decision of the Surgeon General of the Marine Hospital Service, Dr. Armstrong has tendered his resignation and will soon leave for the east.

We believe the decision in the case of Dr. Armstrong a legitimate subject for criticism on the part of a medical journal, and we think it our duty to express, calmly but frankly, our opinion in all such cases of miscarriage of justice.

Dr. Armstrong was ordered to assume command of this station in January, 1890, on the death of Surgeon Goldsborough. Shortly after Dr. Armstrong arrived here, his senior assistant, Passed Assistant Surgeon R. P. M. Ames, refused to administer chlorform to a patient upon request of Dr. Armstrong, his superior, to do so. He was then ordered to do so, and, still declining, was suspended, in strict conformity with the regulations regarding subordinate officers. The suspension was reported to the department in Washington by both parties; the action of Dr. Armstrong was approved.

Smarting under the reprimand, Dr. Ames preferred a number of charges against Dr. Armstrong, involving breaches of discipline, cruelty, and abuse of patients and attendants, and violation of the regulations. These charges were investigated by the Surgeon General in person. The proceedings of the trial were published in the daily papers and are, doubtless, familiar to most medical men in New Orleans.

The evidence brought out that in two cases of hypertrophied spleen Dr. Armstrong had compelled the patients to permit an examination of the region by percussion, and that in a case of indolent buboes he had required the patient to submit to a dressing. The evidence further showed that with attendants his actions had been in the line of strict discipline, in order to secure efficient service. The doctor might have been harsh

at times, preferring to reprimand sharply than to dismiss an attendant, whose negligence required reproof. We mention these points specially, because they concern the only charges sustained, except that Dr. Ames's suspension was prejudicial to good discipline. The evidence showed, as we have stated, at most some harshness, and perhaps error of judgment, but no intentional abuse or cruelty.

At the conclusion of the inquiry the impression pretty generally prevailed that Dr. Armstrong would be sustained, since it was well known that it would be impossible to administer properly an institution like this, devoted largely to the care of the roughest element in the community—roustabouts and deckhands of Mississippi river steamboats—without the strictest discipline. To the surprise of Dr. Armstrong's friends, he was reprimanded, superseded, ordered to report as assistant to his successor, and forbidden to have command for at least one year.

According to the terms of the letter conveying the sentence to Dr. Armstrong, we would have considered a reprimand sufficient; this, even, we do not think justified by the evidence. Surely, the sentence administered, unprecedented as it is in the Marine Hospital Service, was totally unexpected, and we agree with Dr. Armstrong that it was intended, not for the benefit of the service, but to humiliate him for ulterior reasons unknown to him. He very properly, therefore, tendered the resignation of his commission, to take effect when relieved of command.

A telegram published in the papers of New Orleans has announced that Surgeon General Hamilton had returned the resignation, since Dr. Armstrong had, save in this particular, been an efficient and capable officer.

The compliment comes rather late, we think, and would have appeared much better in the letter conveying the sentence. His nine years of competent and earnest service deserved this at least, no matter what crime he might have committed.

We made the acquaintance of Dr. Armstrong in 1881 and 1882, when he was first stationed here. We knew him then as an honorable gentleman and capable surgeon. We have heard of him frequently since then in the medical journals, and

we feel sure that the service has been honored by his devotion to duty and valuable contributions to medical literature.

He has been honored by medical societies in communities where he has been stationed, in many of them taking a lively interest in their debates and enjoying active membership. We remember him as a member of the New Orleans Medical and Surgical Association some nine years ago. He was respected and esteemed by the individual members and was appointed on important committees of the society. Recently, after the trial had been concluded and the evidence was all in, but before the sentence had been telegraphed through the associated press to the New Orleans dailies, Dr. Armstrong was unanimously elected a member of the Orleans Parish Medical Society, the only organized body of medical men of the city. Dr. Armstrong may feel assured that he retains the respect and esteem of the medical men of this city. We regret that he must leave us, but, honorable and high-spirited as he is, we can not see how he could remain here in the subordinate position into which he has been so unjustly reduced.

By his resignation, the Marine Hospital Service loses one of its most distinguished officers; none, we believe, had a more lively and sincere desire to advance the honor and usefulness of that service.

This community loses a high-toned gentleman and the medical profession of the city what, we are sure, would have been a very valuable acquisition. If our sympathy can in any degree mitigate the effect of this injustice put upon him, he has that; we wish him success, wherever his lot may be cast.

We do not subscribe to the sentence in any manner, and believe his Southern birth and political faith have had very much to do with his condemnation.

THE NEW ORLEANS TRAINING SCHOOL FOR NURSES.

In the spring of 1889 the Ladies' Unsectarian Aid Society purchased a building on St. Joseph street, near Baronne street. This building furnished more rooms than were needed for the ordinary purposes of the society. The question then arose, since this society is eminently a practical working body, what

should be done with the useless rooms. It was suggested by one of the ladies that a training school for nurses might be established. The signal failure of a similar school conducted by influential and able physicians was fresh in the memories of these ladies. But the necessity for such a school prevailed against all the arguments drawn from the past and all the dismal predictions of disaster in the future. They determined to make the attempt. They sought and obtained the cooperation of some medical gentlemen of the city, who believed that there was a need for an institution where instruction might be given to those anxious to properly prepare themselves for the very responsible duties of attending the sick. Such properly qualified persons in New Orleans were rare, and there was abundant reason for thinking that there would be a large and increasing demand for the graduates of a properly conducted school. It was natural to suppose that in a community not educated by contact with trained nurses there would be many objectors and evil prophets, and it was known that the failure of the old school would be urged against the possibility of success. But the previous attempt was certainly a praiseworthy one, and called to its support many of the best people of New Orleans. It failed, it is true, and it was a misfortune to New Orleans that it failed, but the effort showed a large sentiment in its favor. Had only one class of meritorious students of nursing been graduated, we believe the success of the school would have been certain and rapid, and trained nursing would now be firmly established in the good will of the community. That school, much to our regret, died a premature death, leaving no legacy, except the absolute demonstration, *by its failure*, that such an institution was a paramount necessity in Louisiana. This feeling never disappeared, and was bound some day to lead to further effort. Could a few trained nurses be educated here and introduced to the public, it was thought that prejudice would give place to patronage and the further success of the school be assured. So, the New Orleans Training School for Nurses was organized in the spring of 1889.

Not a single hospital in New Orleans would open its doors for the practical instruction of the pupils of the school,

and yet it was clearly recognized by all concerned in its organization that practical instruction was imperatively demanded. It was clear, then, that the school would have to rely almost entirely upon itself.

The plan of the school was modeled after that of the Waltham Training School in Massachusetts. Training in the theory and principles of nursing was to be an important feature, supplemented by bedside instruction in the institution and in private families. Here, then, the ladies found, was an opportunity to put the vacant rooms to worthy use.

The school was opened in May, 1889, and a class of seven earnest and intelligent ladies began the first course of instruction.

The course was divided into four sessions of six months each. In the first six months they received instruction by lectures of the faculty on the following subjects:

Food and medicine, hygiene, obstetrical and gynecological nursing, the elements of anatomy and physiology, first aid to the injured, bandaging, practically taught. The keeping of charts of temperature, pulse, and respiration, and the recording of such clinical observations, as are desired by the painstaking physician, have been special features of the instruction. The proper conduct of the nurse toward the attending physician toward the patient and his friends and the domestics of the house, and the general management of the sick room have all been adequately discussed. Unswerving obedience in the carrying out of the physician's directions has been constantly insisted upon.

The assistance of a trained nurse as matron of the institution was secured shortly after the foundation of the school. She materially aided the members of the faculty by maintaining discipline in the school and, being constantly with the students, supplemented by frequent demonstrations the instruction of the systematic course. A ward was opened where patients were admitted free of charge, in order to furnish opportunities for practical bedside illustrations of the lectures. This first six months' course was quite elementary and the students were only exceptionally permitted to undertake cases in private families. During the second six months, the course was

repeated, but somewhat amplified, and the pupils were now sent into private families, only under the direction of some member of the faculty, who gave such instruction *in the sick room* as seemed necessary to qualify them for subsequently undertaking such duties when not under the fostering care of the alma mater.

This instruction in private families can not be too highly commended. In hospitals, where nurses would necessarily have greater control of their patients, for hospital discipline makes it so it might with some reason be urged, that their education would rather unfit them, in some respects, for the proper appreciation of their somewhat changed relations to the sick in private families. They believe that this has been much exaggerated by those who claim that hospital-trained nurses are imperious and overbearing toward their patients, but if there be a germ of truth in the assertion, we think that the objections are necessarily removed by *properly* educating the nurse *in the family*. There she is taught amid the environment, where subsequently her lot will be cast, all the difficulties and embarrassments of her position, social, medical, and physical; she is taught how best to husband her mental and physical strength, her observation is quickened by the candid but kindly criticism of her instructor; who is as well her friend, because anxious for her success; her resources are multiplied by his suggestion and her increasing experience. With sufficient opportunity everything becomes possible in such a course as would result from hospital instruction. The object of this editorial is to ask the endorsement and encouragement of the medical profession, to the end that the school may receive the recognition that it deserves.

The first year of the first course of instruction has just been completed and the students have passed very creditably their second examination. During this third period, as also in the last or fourth term of their two years' course, the students will remain in the school, but will be permitted to answer the call of any respectable physician. They will still get free board and lodging in the institution and in addition will be paid \$5 each a month. They are all willing and anxious to do what they can to pay off in some measure their obligations for the

benefit received in the institution. Their only opportunity is to go out nursing and let the fruit of their labors go directly to the school.

The school has been at considerable expense. We are informed by Mrs. Muller, the President of the Board, that the running expenses of the school are about two hundred dollars a month, and the month of June, owing to extensive repairs and the opening of an operating room, will show an expense of nearly four hundred dollars. These estimates will be rather under than over the actual outlay, since a new class is now forming. To meet these great expenses only a small reserve fund is available, which it is not advisable to use for current expenses, and a very uncertain revenue. To become a permanent institution it must become self-supporting. The only practicable way at present apparent is to keep the first year's students constantly employed. The invitation is, therefore, given to the profession of this and surrounding states to send for these nurses when competent nurses are needed.

The lady managers and the faculty beg that the nurses shall be given an opportunity to demonstrate their competency, earnestness, and devotion to their duties.

They are not yet graduated nurses; they still have some shortcomings, which, we believe, the well-wishers of the school will not criticise too harshly, but will gladly aid them in overcoming. We can assure the profession that they will be invaluable to them in their professional work. By employing them physicians will not only materially benefit themselves, but will, by so doing, lend a helping hand to a meritorious institution, that may otherwise fail for want of proper recognition. The school is justly proud of its first year's work, but is anxious to push on with renewed energy to the accomplishment of better results, if now their efforts be seconded. Success is almost won, and the demonstration is almost complete that nurses can be trained in the south as thoroughly as in the north and east. Already we hear of the starting of another school in Galveston. All such movements have our cordial approval and endorsement. But shall the pioneer in this southern movement pine away and die because of the apathy and indifference of those who are, we are sure, its friends, and certainly its beneficiaries?

We believe the emphatic answer, practically given, should be, and will be, no!

We feel sure the profession will not be displeased with the first year's fruits. The nurses themselves plead for a trial. We shall still believe, until our present observations are proven false, that the verdict of the profession will not be: "Thou art weighed in the balance and found wanting."

THE CONTAGIOUSNESS OF LEPROSY.

No disease is attracting more universal attention at the present moment than leprosy.

The case of Father Damien, a Belgian priest, who, after many years of ministrations among the lepers of the Sandwich islands, acquired the disease and finally died from it, has given to the religious and secular press a fair sample of latter-day heroism to discourse upon, and to the medical profession one more link in the chain of evidence that goes to show that leprosy is a disease communicable from man to man.

Every day new cases are reported, and from a diversity of places, including all climes and all countries; whether they be the low sea-level or the high mountain table lands, none are exempt. In times past we have imported lepers from China, the West Indies, Norway, and even Italy, France, and Germany, and now the Marine Hospital Service, applying the national quarantine act of April 29, 1878, has begun to exclude leper immigrants. Several months ago a leper was refused admission into the port of Boston, and only a few days ago our own quarantine officer at the mouth of the Mississippi, Dr. W. G. Austin, refused to pass a Norwegian sailor who presented symptoms of this repulsive disease.

It is natural, then, that we should inquire how and in what manner this affection spreads? and if the answer is unsatisfactory, another question is bound to be put by every thinking man: Why is the answer unsatisfactory? The latter question is more easily answered than the first, and it is our opinion that the reason that the profession has so little positive knowledge about this malady is because the men who are most familiar with it are those who have until recently said and written

least about it, leaving the problem to be solved by the few observers who see two or three cases in a life time, and, with this scanty data, appear in books or in journals as ardent exponents of theories which need only the light of positive knowledge to expose their utter groundlessness.

Now comes a report from the leper settlement at Hawaii (given in full elsewhere in this issue), showing that the celebrated case of Dr. Arning was far from being a perfect test of the communicability of leprosy by inoculation, for several of the man Keanu's relatives, by blood and marriage, are known to have the disease.

It will be remembered that Arning inoculated a condemned criminal in September, 1884, and, as marked symptoms of leprosy appeared in November, 1887, it was claimed that the inoculation produced the disease.

Commenting upon the case in this JOURNAL a year and a half ago (January, 1889), we expressed doubts as to the scientific value of this inoculation, and which doubts are confirmed by the report referred to. We said: "This is not a perfect test case, however. The man was a *native*. Had he been a foreigner, an Englishman, or American, for instance, it would have been better. There still remains the possibility that he may have had the disease in his system before the inoculation was made. Another point to be considered in connection with the eruption, and upon which sufficient stress has not been laid, is the liability of the disease to show itself when the vitality has been weakened by other causes. This may have been, and probably was, the case with the Hawaiian criminal, unless the jail diet and accommodations are very different in Kalakaua's kingdom from what they are elsewhere."

We, therefore, hail with pleasure the announcement that the leprosy committee, appointed some time ago by the Prince of Wales, is developing a plan for the scientific study of the disease. It is proposed to raise £12,000 for this purpose, and already the sturdy Britishers have collected £7,000. The committee intends to send to Hawaii (Sandwich Islands), Persia, and India, men trained to scientific investigation, who will report upon the etiology of leprosy, its mode of transmission, and furnish data for preventing its extension.

This is the sort of work that counts and bears fruit, and we venture to predict that the results obtained will be an emphatic surprise to the profession at large, particularly with reference to the mode in which leprosy is propagated.

A number of the so-called "non-contagionists" have attempted to make light of the whole question, declaring that this disease is not on the increase to any perceptible degree, but being hereditary, is slowly developed in the offspring of leprous persons, and it is only because general attention has been called to leprosy that so many cases have been reported.

Another class of men, the "contagionists," starting with the readily recognized *bacillus lepræ*, argue the parasitic nature of the disease, and with such facts as the sudden increase of leprosy among the Sandwich Islanders, who had never known the affection until the Chinese visited them, and the Europeans vaccinated them, together with several well authenticated reports of direct inoculation, as by vaccination, for example.

To us it seems that there is some truth on both sides, and, though we lean in the direction of the "contagionists," we are unwilling to state as positively as did Dr. Morrow in his address before the New York Academy of Medicine, that leprosy "is invariably derived from the lesions or secretions of a person similarly diseased," nor are we prepared to declare its virulent principle is "never attached to the soil, the water, or the food."

Dr. Ashmead, of New York, in a paper published in the June number of the *Journal of Cutaneous and Genito-Urinary Diseases*, though not expanding upon the subject, opens out a field of possibilities in what he calls the "intermediary-host function," which must be carefully traversed before we can turn altogether away from it. The suggestion of "immature leper bacilli" occurring in fish, or their parasites, brings us back to an old theory now generally discredited, but never disproved.

This is a fit subject for investigation by the leprosy committee, and one hitherto but little studied, for who knows how many of the bacteria found in the human tissues exist previously in one form or another in the material by which we are nourished?

THE GATHERING OF STATISTICS OF THE PHYSICALLY
AND MENTALLY DEFECTIVE.

We can not give our endorsement to this attempt of the Census Bureau, for the following reasons:

In the first place the data so gathered will be incomplete and unreliable, for obvious reasons; conclusions drawn from their consideration would, therefore, be incorrect and misleading. The superintendent of the census distinctly states that "Physicians' returns are to be used only to correct information received from enumerators." Now, there is a very general determination on the part of the people to decline to give information on these points, and we can not believe that it will be possible to force them to do so. Enumerators are paid so much per name reported, and we know personally of an instance where they, in order to save themselves trouble, have gotten even less information than people would have given if the enumerators had been willing to return.

Statistics gathered in this manner by enumerators, frequently incompetent and unfaithful in the discharge of their duties, must necessarily be extremely defective and incomplete, and should even the whole profession unanimously respond to the appeal of Dr. Billings, the returns would be only partially corrected and therefore correspondingly valueless for attaining the object aimed at.

But the second objection is also a potent one. We have, personally, entire confidence in the word of Dr. Billings, but we do not believe that he can sufficiently control the work of the numerous correctors of these returns to do away in toto with the possibility of injustice to innocent people. But suppose that this could be assumed, the fact would still remain, that we have no right, professionally or legally, to give much of the information asked for in these tables. A physician has the right to give any information about himself he chooses, but there his right stops. If it is wrong to give the information under circumstances which would not insure its proper use, then the physician would be wrong in giving the information at all, and surely in this instance, where the benefit to be attained does not in any manner justify his putting his patients' reputation to the least degree in jeopardy. We are sorry that our views do not coincide with those of the bureau, whose motives, we feel sure, are in every respect honorable and commendable.

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

SURGERY.

Previous to the introduction of the laryngoscopic mirror into practice there are but few instances on record in which intralaryngeal growths were discovered and successfully removed during the lifetime of the patient. The majority had been discovered upon the post-mortem table, the rational signs to which they had given rise during life having remained unrecognized.

When, in the year 1854, the histories of all the cases on record up to that time of growths of the larynx, sixty-four in number, were collected, in only nine had any attempt been made to remove the neoplasm.

From the year 1858, when the laryngoscopic mirror was first introduced into practice, the subject assumes a new phase: its historical interest ceases, its practical increases. The rapid development of special knowledge, the immense increase in the number of laryngeal growths now discovered; the impetus given by Bruns, when in 1861 he removed, by the aid of this same little mirror, a fibroid growth, for the first time in history, from the larynx,—all are the outcome of the discovery and utilization of the laryngoscope.

The etiology of laryngeal neoplasms is in much doubt. Chronic catarrh of the mucous membrane is generally regarded as the most frequent cause, but in all probability it is a result rather than the cause of laryngeal growths. Mechanical irritation of the vocal cords and larynx from over-use, prolonged use, and strains of voice has also been alleged as the causes, but in reality tumors are not seen in this class of cases with any more frequency than in others. We know from clinical experience that laryngeal growths may develop with perfectly healthy surroundings, and that conditions I have just referred to may exist, commonly do exist, without their development. Tubercular disease and syphilis do not predispose to the formation or development of true laryngeal neoplasms, and heredity rests upon too uncertain a basis to be considered as a cause.

The influence of sex seems to play an important part in their production. Men are more apt to be affected than women, probably by reason of exposure, or irritating occupations, etc. Age also is an important factor in this connection. From twenty to fifty is the most favorable time for the development of neoplasms: after fifty they are rarely met with. In infancy they are occasionally seen. One or two cases of congenital origin are reported.

The symptoms of tumors in the larynx vary considerably, but those that are of importance refer to alterations in the voice and interference with respiration. Phonation is more or less interfered with in all cases, and more especially when the growth is situated on the vocal cords. Its site, mode of attachment, and size play an important part in this connection. A tumor on the edge of the cord will produce more disturbance in phonation than one situated on its upper surface, and a growth below the cords will create less than one above, one in the anterior commissure more than one in the posterior commissure, and one in the middle of a vocal cord more than one at either extremity.

From this it can be readily seen that interference with normal phonation depends more, perhaps, upon the location of the tumor than upon its size, and in harmony with these differences in location and the size of the growth will the voice be changed in the various grades of aphonia, from huskiness to absolute loss.

Dyspnœa is rarely met with in benign tumors of the larynx. A neoplasm only causes mechanical obstruction when of large size, and a benign growth, with the single exception of papillomata, never attains sufficient size to produce such an obstruction. In the case of adults even papillomata seldom cause much mechanical interference, as the larynx is large. Constitutional symptoms are, as a rule, of little moment, except in the case of children, who may have large papillomata that block up the larynx and interfere with respiration, thus producing a train of constitutional symptoms associated with or dependent upon nonaeration of the blood.

Though a variety of benign growths of the larynx have been described, there are in reality but few forms met with in practice. Papillomata, fibromata, and cystic growths are those most frequently observed, and it is those alone that I will consider to-day. Papillomata are the most frequently met with, not only in adults but especially in children. Their size varies from a millet seed to a walnut. They are reddish, warty, or cauliflower-like growths, and are most commonly situated on the anterior two-thirds of the vocal cords. Histologically considered, they are simply collections of enlarged papillæ, composed of connective tissue, plentifully supplied with capillary vessels and covered with epithelium.

I show you here two patients, each with a papillomatous tumor of the larynx, in each situated upon the vocal cords, and therefore interfering with vocalization, as you now hear as the patient speaks. In the one case the interference is marked, in the other but slight. I will now show you in a blackboard

drawing just how these little growths look in these larynges. Does not their appearance, reddish and irregular, wart-like, make their differential diagnosis for you from other forms, and their size and location upon the vocal cords tell you why the patient is partially aphonic and explain the reason of its grade?

Fibromata are the next in order of frequency, and are usually round or oval, hard or soft, red in color, and of a smooth surface. They always occur singly upon the vocal cords, are of a slow growth, and after removal manifest no tendency to recur. They are made up of interlacing bundles of white elastic tissue, and are generally covered by several epithelial layers. These numerous drawings will clearly show you their variations in form, size, and location.

The third variety referred to, viz., the cystic growths, never attain a very large size. Their favorite location is the lingual aspect of the epiglottis, and their color is yellowish or white. They have dense walls and are filled with a thick, white, semi-fluid material when situated on the epiglottis. If situated on the edge of a vocal cord they have thinner and more delicate walls, while their contents are more fluid and transparent. They look like little white beads. Thoroughly laid open and emptied of their contents, cystic growths manifest no tendency to recur.

If the laryngoscopic mirror be used the diagnosis of the different varieties of neoplasm can be readily made. The reddish, warty papilloma can not easily be confounded with the small, hard or soft, bright red, and smooth fibroid; the latter can be readily differentiated from the white or yellow, round, smooth cyst.

The prognosis as regards life in benign laryngeal growths in adults is seldom a matter for serious consideration. The tumor can be readily removed without danger, and by the use of cocaine with but little discomfort to the patient. In children the prognosis is much less favorable as regards life. The extra-laryngeal method of operating must frequently be chosen, and the additional risk of a serious surgical operation thus incurred.

The prognosis with regard to restoration of voice depends in a great measure on the character, situation, size, and number of laryngeal tumors, and especially upon the question whether they can be removed through the mouth or not. In the adult, if the growth be single, small and pedunculated, and can be easily reached by instruments introduced through the mouth, the prognosis as to full restoration of voice is favorable; but if multiple, sessile, and not clearly defined, and unfavorably situated, the chances of voice restoration corresponds with the difficulty of their removal. In children the same laws apply with increased force.

In the matter of treatment of the intra-laryngeal neoplasms, as a general rule they should be carefully and thoroughly removed as soon as they have been discovered by means of the laryngoscope. There are but few exceptions to this rule, and these relate to small growths on the epiglottis and ventricular bands, which give rise to no discomfort and have ceased growing beyond a certain size; they may be left undisturbed.

Having decided, then, upon the removal of laryngeal tumor, there is practically but little difference of opinion in the method to be employed. The forceps of McKenzie subserves the best purpose in the majority of cases. Well warmed, it is introduced into the larynx, which has been thoroughly anæsthetized by a solution of cocaine. The growth is then seized and removed, whole or piecemeal, several seances being sometimes necessary for the removal of a large growth. Complete extirpation of these growths should always be aimed at and effected, if possible.

In children this is often an impossibility, owing to the age of the little patient, the size of the larynx, and the lack of intelligent coöperation on the part of the child. The growth is usually a papilloma, and must be thoroughly removed or it will recur. To do this by the natural passages we can not, and are obliged to select an extra-laryngeal method of operating, usually thyrotomy. I show you here, a little child; larynx full of papillomatous growth, wearing a tracheotomy tube, as respiration through the natural passages is an impossibility—in whom the operation mentioned must be undertaken. No manual skill, no dexterity, will succeed in thoroughly clearing this little larynx of its occluding growth through these little passages. You have no room to work; the growth is too extensive to be reached completely by forceps. Thyrotomy will here be the child's salvation.—*International Journal of Surgery.*

MEDICINE.

The attention of our readers is directed to the elaborate article, published in this number, on Anthrax: The Disease of the Egyptian Plagues.

This paper represents a large amount of labor and original research, and the logical conclusions arrived at seem eminently justifiable. Dr. Blanc treats his subject from a physical standpoint, wisely steering clear of theological disputes.

It is shown that the contagious cattle disease, anthrax, was known to the Egyptians in ancient as well as in modern times. Learned naturalists are called upon to prove that the Nile is

capable of being polluted and discolored at the same time, the latter being due to animalculæ and red mud coming down during the inundation.

When the waters begin to fall the frogs of the second plague appear, then gnats and mosquitoes, and then flies of many varieties; the author's idea being that the dead frogs attracted the flies, and that the swampy fields following the overflow acted as a breeding ground for the gnats and mosquitoes.

The murrain, occurring among the pent up cattle, was spread by the insects, *i. e.*, mosquitoes, gnats, and flies; and then, lighting upon human beings, these insects imparted the same disease to man—malignant pustule; thus constituting the sixth plague, called the plague of boils and blains.

Having shown that the "boils" of the sixth plague were probably the same disease as the "murrain" of the fifth, which had been spread by the gnats and flies of the third and fourth, these having been generated by the inundation of the first and the death of the frogs in the second, the author proceeds to show how the plagues of locusts, hail, and darkness (sand storm), destroyed vegetation, thus compelling the consumption of diseased animal food, and consequently internal anthrax—a very fatal disease.

Much is said in this connection that we have not even space to allude to, particularly with reference to the manner in which the Jews escaped the disease that destroyed the Egyptians. This last argument greatly strengthens the author's final conclusions that the sixth and tenth plagues were different manifestations of one and the same disease.

THE LATE NATIONAL MEDICAL CONGRESS OF JAPAN.

The first national assembly of physicians in Japan was held in Tokyo, April 1 to 7, 1890. It is a reasonable expectation that an event of so much interest would receive due notice in the only medical periodical which is published in this country in a European language, but we regret to inform our readers that the arrangements for a full report which were thought to be trustworthy have miscarried, and only such an account can, therefore, be given as a brief visit during the opening ceremonies affords.

The attendance was large, numbering several hundreds, and probably consisted somewhat of those, not physicians, who were attracted by the novelty of the meeting. This presumed fact may account in part for the apparent youthfulness of the

assembly, at any rate middle-aged and old faces were a small minority. A further explanation of this may be found in the fact that it is among the rising generation of physicians in Japan that scientific medicine finds most of its adherents, as would be the case in any country under similar circumstances.

The faces were, however, all Japanese, with two exceptions; a matter of surprise, for of the nearly two score foreign physicians resident in Tokyo and Yokohama one would have expected the presence of half the number. Their absence can not be ascribed to lack of interest, but might perhaps be explained by the committee on invitations. The steady progress of medical science in Japan depends much upon communication with the profession in the west; any circumstance, therefore, which tends to interrupt this should not pass unnoticed.

The programme for the first day was as follows:

In a separate apartment the reception committee received the officers *pro tem.* and invited guests. In an adjoining room was arranged a fair exhibit of drugs, instruments, and medical literature, the latter comprising original and translated works in considerable number. Their subject matter could not be ascertained, except that a translation of Esmarch's Ambulance was pointed out. Among the instruments were nearly all that are necessary for an ordinary outfit and a few for special work, such as microscopes, microtome, galvano-cautery, etc. These were of foreign manufacture, the former domestic and as good in appearance as those displayed on similar occasions in the west, for the Japanese instrument maker reproduces admirably anything of which he can get a model.

Adjoining these rooms was a large auditorium in which, at the appointed hour, the opening exercises were held. These consisted of the usual addresses appropriate to such an occasion, one of them, by Dr. Nagayo, Director of the Central Sanitary Bureau, recounting the early history of Western medicine in Japan with an exhibition of some of the first translated works, which were received by the assembly with applause.

The programme for the next five days consisted in the reading of papers by distinguished Japanese physicians simultaneously at two places in the city, from 8 A. M., to noon, the afternoons being given up to visiting the various hospitals and other places of professional or general interest. On the last day a general social gathering was held in Shiba park, at which there was an ample provision for refreshment.

A glance over the list of papers to be read, as published in the printed programme, shows a goodly variety of subject, but one is impressed with a sense of the absence of something which should be a feature of the first national medical meeting in a country like Japan. There were papers, medical and

surgical, upon nearly every anatomical region, papers of interest and value, doubtless, but excepting, possibly, one on "Social Hygiene," by Dr. Furukawa, and another on "Domestic Hygiene," by Prof. Tsuboi, the list contains not one which may serve to indicate an appreciation of the fact that Western medicine must be adapted to conditions present here and not merely adopted, none showing that any difference is suspected to lie between Japanese and Western people and their environment in those matters which form the basis of practical medicine; it cannot be disputed, however, that the natural history of a people and of their diseases should receive consideration when the application is made to them of rules and principles of treatment which have been formulated from a study of possibly different conditions. Certain material for the superstructure of scientific medicine in Japan may be imported, but the foundation must be laid with native stone. It may be that the omissions here adverted to were unavoidable, that the present state of medicine in this country requires exclusive attention to practical therapeutics; if this is so, it is to be hoped that the causes, whatever they may be, will not long act to prevent an establishment of those general principles upon which a rational therapeutics must rest. The investigation of these principles can be made by those only to whom the conditions of life and disease in this country are or may be intimately known—the native physicians of Japan.—*Sci-i-kwai Medical Journal*, April, 1890.

THE QUESTION OF LEPROSY BEFORE THE IMPERIAL SOCIETY OF MEDICINE.

Translated for this Bureau from *La Revue Médico-Pharmaceutique*, Constantinople, April 30, 1890.

At a recent meeting of the Imperial Society of Medicine, Dr. Stékoulis presiding, Dr. Virchow expressed himself as follows on the subject of leprosy:

1. The constant presence of the pathogenic microbe is the only evidence that can be accepted of the microbic nature of a disease.
2. Leprosy may be considered a microbic disease, the *bacillus lepræ* being invariably present. There is not a single instance in which careful search has not resulted in the discovery of a greater or less number of these micro-organisms.
3. The origin and source of supply of these microbes are unknown. Dr. Arning's investigations have proved that leprosy is not caused by the use of putrid fish. [It has since

come to light that Dr. Arning's famous inoculation was not a fair test.—Eds.]

4. Attempts to cultivate the bacillus outside the human body have so far been attended with negative results. Animal inoculations furnish no positive data.

5. The contagiousness of leprosy is inferential from its indisputably microbic nature. The physicians of Sweden and Norway accept the heredity of the disease and deny its contagiousness.

The succeeding sittings of the Imperial Society will be devoted to the consideration of the heredity, contagiousness, and history of leprosy.—*Weekly Abstract of Sanitary Reports.*

DERMATOLOGY AND HYGIENE.

IDENTITY OF DIPHTHERIA AND CROUP.

The *Monthly Sanitary Record*, the organ of the Ohio State Board of Health, publishes the following interesting experience bearing upon the identity of two diseases which closely resemble each other:

A serious outbreak of diphtheria in Mansfield has been traced to a case of so-called *membranous croup*, and emphasizes the necessity for health boards to treat these diseases as identical so far as all measures for their prevention is concerned.

In the outbreak at Mansfield a child died with what the attending physician pronounced membranous croup. The case was not reported to the health office, and the child, dying on Monday, was not buried until Wednesday, scholars having set up with the corpse, and a public funeral being held.

Two children in the same family and one in a neighboring family were taken about this time with genuine diphtheria, and a number of persons were exposed to the disease.

The Mansfield Board of Health will now require physicians to report cases of membranous croup, which will be dealt with in the same manner as cases of diphtheria. The Columbus Board of Health adopted this rule some time ago, and we would be glad to see such a rule enforced by every Board of Health in the state.

The question of the identity of membranous croup with diphtheria does not affect this proposition, although it has been repeatedly shown that genuine diphtheria may develop from exposure to cases diagnosed as membranous croup.

LINIMENT FOR BURNS.

L'Union Médical gives the following formula of a liniment to be used in cases of burn:

Salol	1 gramme.
Olive oil.....	
Lime water, each.....	70 grammes.

THE CASE OF KEANU.

Dr. Sidney Bourne Swift, resident physician at the Leper Settlement at Molokai, H. I., writes to the *Occidental Medical Times* relative to an extract from a German medical journal which appeared in its issue of January, 1890. This extract was from Dr. Arning's report of the case of Keanu. Dr. Swift says:

Dr. Arning would have us believe that had Keanu not been inoculated by him with leprous virus he would not now be a leper, and that previous to the operation he was to all intents and purposes a clean and healthy man. He says: "The subject of the experiment was a large, well-built Kanaka, to all appearances of robust health; no sign or history of syphilis or leprosy and no history of leprosy in his family on either side or in his children." And further on: "During the year 1888, he must have gone down hill very rapidly, as in February, 1889, he was remanded to the leper colony, being in the last stages of the disease."

No one will deny Dr. Arning the privilege of entertaining peculiar ideas or fostering pet theories, however erroneous, but when these ideas and theories are espoused by other medical men of world-wide repute and spread broadcast as scientific facts, it is but reasonable to infer that the profession will attach an importance to the subject which the facts in the case do not at all warrant. I think this matter should be corrected, and with that purpose I shall briefly state the facts that are within my personal knowledge.

My acquaintance with Keanu dates from the day of his arrival at this settlement (February 9, 1889), and since that time I have had him constantly under observation. I therefore claim to be in a position to know more about the man's condition for the last year than Dr. Arning, or any one else. Keanu, on his arrival, was immediately placed in the hospital at Kalawao, where I visited him half an hour afterward. I found him in a very helpless condition; his face and head were badly bruised, and he had sustained a severe injury to his back and lower extremities; in fact, he was bruised all over. Inquiry elicited the fact that a few days previously he had had a "fit"

and had fallen down a metallic winding stairs in the jail at Honolulu, and to this accident his condition was attributable. During the first few days of Keanu's residence in the hospital he had two or three attacks of vertigo, and it is fair to suppose that it was during one of these attacks that the accident in the jail had occurred.

In about six or eight weeks Keanu had fully recovered, and as he was a prisoner, he was expected to do some work about the hospital yard. I here formed the opinion that he was a good-natured, industrious, and honest man; an opinion I have never since had reason to change. Scarcely a day passes that I do not see and talk with him, and I have repeatedly treated him for sores on his hands—the result of work—sores on his feet, and other (to lepers) trivial complaints. Some four or five months ago he scalded his hands badly, and since that time he has been an inmate of the hospital, and although fully recovered, exempt from all work. Except that in so far that he is a leper of the tubercular type and rather advanced, he enjoys life and is comparatively free from the neuralgic pains so common amongst lepers of all types.

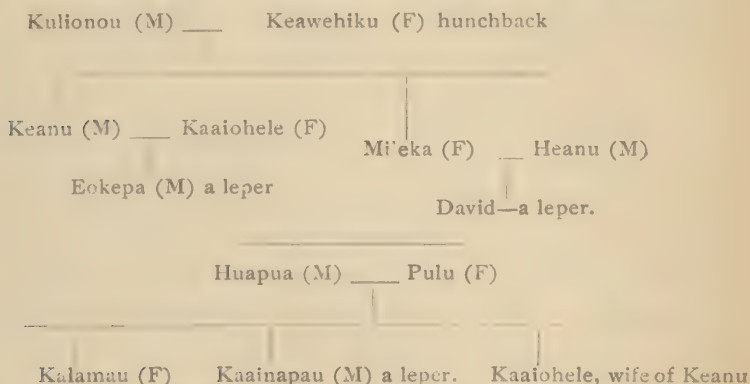
His present condition is as follows: Age, 70 years; weight, 178 pounds; leprous infiltration beneath integument of face and forehead; tubercular enlargement of lobes of both ears, the right more than the left; ulceration of palate, and extensive ulceration of pharynx; tubercular enlargement of uvula; tubercular enlargement of alæ of nose; partial occlusion of nasal fossæ, due to leprous infiltration beneath pituitary membrane; chronic conjunctivitis and pterygium-like growth of both eyes; almost deaf; voice hoarse and with nasal inflection. Anæsthesia of hands and feet, although no pronounced enlargement of ulnar or tibial nerves; numerous tubercles distributed over the entire body, but most marked on the upper and lower extremities; three small but angry looking ulcers on outer aspects of left leg; softened tubercle on dorsum of right foot. The hands and feet have a boggy feel, and pit slightly on pressure. His appetite is good; feels well and looks well, and may live long enough to die of old age.

In the same ward and in the bed adjoining Keanu's is a young man named David, aged 20 years, a far advanced tubercular leper, covered with sores, almost blind, nearly deaf, and utterly helpless. This young man is the son of Keanu's only sister Mileka, now deceased. Upon him Keanu bestows the most assiduous care.

Nor is this Keanu's only relative, his own son Eokepa, aged about 23 years, and his first cousin Maleka, on his mother's side, are both lepers and reside at this place at this date. Eokepa has been a leper since 1873, leaving school in that year

on account of the disease. Keanu's brother-in-law Kaainapau, died a tubercular leper at Kalawao, in 1885, and his (Keanu's) mother, Keawehiku, was a hunchback.

The following tables give the pedigrees of the family:



It would therefore seem that there is a family history of leprosy. Dr. Arning's statement to the contrary notwithstanding. Even if there was an absence of such a history or the absence of the fact of Keanu ever having lived in a community where leprosy was prevalent; still there was an exposure in the fact that for the first three months of his incarceration in the jail at Honolulu he was in charge of a turnkey named Malaihi, who is a leper at this place, at this date, and according to the latter's statement has been a leper for 20 years. Of so little import (in my mind) is Dr. Arning's inoculation, that I attribute fully as much to the possibility of Keanu contracting the disease from the turnkey.

But supposing that the inoculation did propagate the disease in Keanu, then I would say that its ravages in this case in the short space of five years are such as to make it unparalleled in the history of this settlement, and contrary to what little experience I may have acquired during a continuous residence amongst a thousand lepers for nearly two years.

In October, 1889, I excised the cicatrix from Keanu's arm, and it has been submitted for microscopic examination to a pathologist of undoubted skill and recognized ability, whose report will soon appear in these columns.

I wish here to correct another error which has been going the rounds of the journals, to the effect that "Dr. Hoffman, late medical officer at Molokai, had recently fallen a victim to the disease." Dr. Hoffman never was medical officer at Molokai, nor did he ever visit the settlement professionally or otherwise. Nor was he ever an inmate of any government institution as a leper, to the best of my knowledge.

MEDICAL ITEMS.

KENTUCKY STATE MEDICAL SOCIETY.

The thirty-fifth annual session of the Kentucky State Medical Society was held at Henderson, May 14, 15, 16, 1890. The President, Dr. J. A. Octerlony, of Louisville, was in the chair, and the secretary, Dr. Steele Bailey, of Stanford, was attending to his duties. The report on the recent Progress in Surgery was made by Dr. Archibald Dixon, of Henderson. He compared the surgery of former years with that of the present time, giving especial attention to the changes wrought by antiseptis. He discussed laparotomy, intestinal and cerebral surgery, and the radical cure of hernia. Dr. G. Frank Lydston, of Chicago, on invitation, delivered an address on "Materialism v. Sentiment" in the study of the causes and correction of crime. "Progress in Medicine," by Dr. F. C. Wilson, Louisville. "Progress in Obstetrics," by Fayette Dunlap, Danville. Many other papers of great interest were read. The President took for his subject, "Pioneer Medical Men and Times in Kentucky." The committee on nominations made the following report, which was adopted, and the following declared elected: President, Geo. W. Beeler, Clinton; Senior Vice President, Dr. J. M. Poyntz, Madison; Junior Vice President, Dr. A. M. Vance, Louisville; Permanent Secretary, S. Bailey, Stanford; Assistant Secretary, J. Y. Oldham, Lexington; Treasurer, Dr. J. B. Kennard, Lancaster; Librarian, T. B. Greenly, West Point. Next place of meeting, Lexington; Chairman of committee on arrangements, Dr. David Barrow.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, FOR THE THREE (3) WEEKS ENDED MAY 31, 1890.

- Purviance, George, Surgeon. Detailed as chairman Board of Examiners, May 31, 1890.
- Long, W. H., Surgeon. Granted leave of absence for three days, May 19, 1890.
- Godfrey, John, Surgeon. Detailed as member of Board of Examiners, May 31, 1890.
- Irwin, Fairfax, Surgeon. Detailed as recorder, Board of Examiners, May 31, 1890.
- Carter, H. R., P. A. Surgeon. Ordered to examination for promotion, May 31, 1890.
- Banks, C. E., P. A. Surgeon. To proceed to Boston, Mass., on special duty, May 12, 1890.
- Peckham, C. T., P. A. Surgeon. Granted leave of absence for eight days, May 14, 1890.
- Ames, R. P. M., P. A. Surgeon. To proceed to Memphis, Tenn., for temporary duty, May 14, 1890.
To proceed to Gulf Quarantine Station for temporary duty, May 31, 1890.
- Perry, T. B., Assistant Surgeon. Ordered to examination for promotion, May 31, 1890.
- Condict, A. W., Assistant Surgeon. Granted leave of absence for twenty-two days, May 24, 1890.

MORTUARY REPORT OF NEW ORLEANS

FOR MAY, 1890.

CAUSE.	White	Colored	Male	Female	Adults	Children	Total
Fever, Yellow							
“ Malarial (unclassified)	1	2	1	2		3	3
“ Intermittent							
“ Remittent	1	1	1	1	1	1	2
“ Congestive	5	3	3	5	2	6	8
“ Typho-Malarial	5	3	2	6	6	2	8
“ Typhoid or Enteric	2	1	1	2	2	1	3
“ Puerperal	1			1	1		1
Scarlatina							
Small-pox							
Measles	5	3	5	3		8	8
Diphtheria	7		3	4		7	7
Whooping Cough		1		1		1	1
Meningitis	9	4	6	7	3	10	13
Pneumonia	17	15	14	18	13	19	32
Bronchitis	6	5	5	6	1	10	11
Consumption	33	30	33	30	60	3	63
Cancer	15	5	4	16	19	1	20
Congestion of Brain	7	2	6	3	4	5	9
Bright's Disease (Nephritis)	10	6	10	6	15	1	16
Diarrhœa (Enteritis)	31	8	21	18	13	26	39
Cholera Infantum	41	8	23	26		49	49
Dysentery	4	2	3	3	6		6
Debility, General		3	2	1	3		3
“ Senile	11	15	10	16	26		26
“ Infantile	6	6	4	8		12	12
All other causes	166	94	141	119	150	110	260
TOTAL	383	217	298	302	325	275	600

Still-born Children—White, 26; colored, 17; total, 43.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 24.91; colored, 37.47; total, 28.35.

DIPHTHERIA RECORD FOR MAY, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	5		5	1	4		4
2	5	1	6	2	1		1
3	1	2	3	3	2		2
4				4			
5				5			
6				6			
7				7			
	11	3	14		7		7

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—MAY.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths.	SUMMARY.
	Mean	Max.	Min.		
1	72	80	65	.01	Mean barometer, 29.975.
2	71	78	64	.84	Highest barometer, 30.264, 8th.
3	74	84	65	1.13	Lowest barometer, 29.766, 5th.
4	74	83	65	.23	Mean temperature, 74.4.
5	72	80	63	.67	Highest temperature, 87, 11th; lowest, 59, 8th.
6	72	78	65	.....	Greatest daily range of temperature, 20, 7th.
7	71	81	61	.....	Least daily range of temperature, 7, 30th.
8	66	74	59	.....	MEAN TEMPERATURE FOR THIS MONTH IN—
9	70	80	60	.....
10	75	84	66	.....	1871... 73.2 1876... 74.6 1881... 76.8 1886... 72.6
11	78	87	68	.....	1872... 75.6 1877... 72.8 1882... 74.4 1887... 75.2
12	78	87	69	.....	1873... 73.7 1878... 75.9 1883... 74.3 1888... 72.8
13	76	84	68	.....	1874... 75.4 1879... 70.5 1884... 76.4 1889... 73.8
14	74	80	68	.14	1875... 76.0 1880... 76.3 1885... 73.9 1890... 74.4
15	71	79	63	.05	Total deficiency in temp'ture during month, 22.
16	74	83	66	.....	Total deficiency in temp'ture since Jan. 1, 481.
17	76	84	69	.....	Prevailing direction of wind, S. E.
18	73	81	65	.26	Total movement of wind, — miles.
19	75	83	67	.43	Extreme velocity of wind, direction, and date,
20	76	84	68	.....	45 miles, N. W., 5th
21	75	84	66	.....	Total precipitation, 5.32 inches.
22	76	83	69	.....	Number of days on which .01 inch or more of
23	75	83	67	.12	precipitation fell, 14.
24	76	84	69	.21	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	74	77	70	.15	
26	74	80	69	.79	FOR THIS MONTH IN—
27	76	82	69	.....	1871... 5.08 1876... 7.10 1881... 3.20 1886... 3.07
28	78	84	71	.....	1872... 3.14 1877... 1.48 1882... 6.83 1887... 3.99
29	78	85	71	.29	1873... 18.68 1878... 8.11 1883... 5.41 1888... 9.75
30	76	79	72	T	1874... 0.22 1879... 4.63 1884... 4.33 1889... 1.17
31	79	85	73	.....	1875... 2.53 1880... 6.55 1885... 5.77 1890... 5.32
					Total deficiency in precip'n during month, .06.
					Total deficiency in precip'n since Jan. 1, 14.15.
					Number of clear days, 8; partly cloudy days,
					12; cloudy days, 11.
					Date of Frosts, none.
					Mean maximum temperature, 81.9.
					Mean minimum temperature, 66.8.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer.*

PUBLISHERS'

DEPARTMENT.



Address all communications to L. GRAHAM & SON, Mgrs. Bus. Dept., 99 to 103 Gravier St., New Orleans.

The New Orleans Medical and Surgical Journal.

Subscription, Three Dollars per annum, in advance.

Advertisements, as per Printed Schedule mailed to applicants.

NEW SERIES:
Whole No. 307.

JULY, 1890.

VOL. XVIII.
No. 1.

NEW ADVERTISEMENTS IN THIS ISSUE.

	PAGE.		PAGE.
Aletris Cordia	21	Medical Dep't University of N. Y	27
Bowden Lithia Springs Co	26	Medical College of Alabama	25
College of Physicians and Surgeons	12	N. Y. Pharmaceutical Co	6
Fairchild Bros. & Foster	(cover) 2	Robinson Pettet Co	2
Jefferson Medical College	12	Scott's Emulsion	1
Lilly & Co., Eli	8	Woman's Medical College	20

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Baker's Cocoa	20	Planten's Capsules	12
Battle & Co	11	Reed & Carnrick	18
Bellevue Hospital Medical College	20	Sanitarium—Von Gohren's	15
Boehringer & Soehne	10	"Sanitas" Antiseptics, etc	1
Cerebro-Spinant—I. O. Woodruff & Co	23	Schieffelin & Co., W. H.	3
Cook, Gus	20	Sharp & Dohme—Druggists	16
Crittenton, C. N.	14	Svapnia	12
Graham & Son	20	Tarrant & Co	17
Health Restorative Co	4	Tasteless Quinine	15
Lehn & Fink	24	The American Practitioner and News	22
Listerine	9	Wagner Medical Manufacturing Co	7
Marchand's Peroxide of Hydrogen	28	Wheeler's Tissue Phosphates	15
Mariani & Co	5		COVER.
McDermott, A.	15	Buffalo Lithia Water	3
Medical Dep't of the Tulane University	13-20	Fairchild Bros. & Foster	2
New York Medical Journal ..	25	Fellows, James I.	4
Osborne, Robert J.	15	Sharp & Dohme—Chemists	2

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

PUBLISHERS' NOTES.

MEDICAL PRACTICES and drug stores bought and sold Partnerships arranged Assistants and substitutes provided. Particulars free. Address, The Medical Transfer Bureau, Lynn, Mass.

THE PRESENT NUMBER

Of our JOURNAL commences its eighteenth volume, and we have endeavored, as much as the limits of the case will allow, to mark the transition in an appropriate way. Our readers will notice that in addition to the change of style that has been made and which we think is an improvement, we have so increased the size of page that the present eighty pages will practically contain as much as eighty-eight of the old size. This is certainly an improvement in quantity which however will not effect the quality. Arrangements now made enable us to say that the coming volume will be far superior to any of the past and will make it the peer of any similar publication of this country.

We trust that our subscribers and advertisers will appreciate this evidence of our constant endeavor to serve them, and we may state just here that the limit of our endeavor has not been reached, and will not be, until the JOURNAL, now the leading Southern publication, becomes a recognized leader in the world's medical literature.

OUR ADVERTISEMENTS.

Since the present management of the JOURNAL was instituted it has been the endeavor to so present the claims of the advertising patrons as to merit the attention and perusal of its readers. Too often this department of a publication is presented in a slipshod, unattractive appearance, entirely unworthy of the importance due to it. Advertising and progressiveness have become almost synonymous terms, and it is a fair deduction that those who continually present their claims in this manner have taken all proper steps to uphold this inference, in the way they prepare their goods and in the desire to always improve. In this day of inter-dependence of one occupation upon another, the practicing physician has to largely rely on the integrity as well as the energy of the purveying class, and much of the advance in all science has been due to this spirit of improvement that is constant in "trade" circles. Consequently there is always much to be gained by studying the advertising pages of especially a progressive journal, and so long as we incorporate advertisements in the JOURNAL it must be understood that we want our subscribers to READ THE ADVERTISEMENTS.

OUR AUGUST NUMBER

Will contain a paper by DR. GEO. LAWRASON on "VASCULAR NEUROSES." Dr. Lawrason will explain the phenomena of Hysteria in a manner consonant with modern pathology.

DR. J. J. BLAND's practical and interesting contribution on the subject of "HEPATIC ABSCESS" will appear in our August issue. It was unavoidably crowded out of the present issue, (for which it was announced last month) owing to a misunderstanding.

DR. R. MATAS, will contribute a review of the present status of the operation of "INTESTINAL ANASTOMOSIS;" and the clinical report of a case of complete cleft palate operated successfully by Ferguson's method.

The usual features of the Journal, including CORRESPONDENCE, ABSTRACTS, ANNOTATIONS, etc., will be presented under improved arrangements.

DOCTOR, have you tried the famous Bowden Lithia Water?

SAMPLES of Sander & Son's "Eucalypti Extract (Eucalyptol)" gratis through Dr. Sander, Dillon, Iowa. Eucalyptol stands foremost as a disinfectant and antiseptic. Meyers Bros. Co., St. Louis, Mo., sole agent for the genuine product.

THE ATTENTION of physicians is called to the fact that they can on application to Drevet Manufacturing Company, 10 W. Fourth street, New York, receive free of charge a book entitled *The Therapeutical Applications of Peroxide of Hydrogen and Glycerone*. The work has been written as a general answer to the many inquiries received regarding these new remedies, and will not only be of value to those who have special interest in the matter, but may give worthy suggestions to those who are unacquainted with the particular merits and indications of these preparations.

COCA ERYTHROXYLON.—We need not enter into a full description or the history of the Erythroxylon Coca, as we believe that most medical men are fully acquainted with the principal facts concerning the plant. We may, however, recall to mind that the leaf is the only part of the plant used. Very much depends, therefore, upon the plucking of the leaf, and the time at which it is plucked, the subsequent care of the leaf being matter of considerable importance, and affecting very materially the preparations made from it. M. Mariani almost immediately after the importation of coca into Europe took up the study of the plant, and commenced manufacturing the various specialties associated with his name, viz.: Vin Mariani, Elixir Mariani, Pate Mariani, The Mariani Pastilles, etc., preparations which are known all over the world, and which have acquired their well known reputation by their purity and efficacy. The stimulating property of the leaf in its natural state has been tested by experienced travelers, and it is this invigorating property which the physician wishes to bring into use, and which he is enabled to do in a palatable form by means of M. Mariani's coca wine, this Wine being indicated where there is great depression, long continued exhaustion, and where a special stimulative action is desired. Vin Mariani is agreeable, palatable, imparting by its diffusibility an agreeable warmth over the whole body, and exciting the functional activity of the cerebro-spinal nerve centres. We have frequently prescribed this wine, and we can from practical experience recommend it.—*The Provincial Medical Journal*, April 1st, 1890.

SEXUAL DEBILITY.—Probably the most frequent, and at the same time the most intractable cases which present themselves before a specialist in genito-urinary diseases, are those of "sexual debility"; and this, again, is most commonly exhibited in the forms of sexual impotence and nocturnal emissions. Both forms are usually the result of excess, but it is no uncommon thing to find a married man, with no trace of previous pernicious history, and of present temperate habits, complaining of oncoming sexual inability. These are of all cases the most unsatisfactory, owing to the serious mental depression which almost invariably accompanies them and which occasionally culminates in suicidal mania. In all these cases much may be done by improving the patient's general condition, which is usually below par, by attention to hygienic surroundings and by electropathic treatment. It is all important, however, that we should have the assistance of a really reliable drug, but up to the present our efforts to procure such have not been over successful.

Lately, however, Messrs. Eli Lilly & Co., of Indianapolis, have introduced a pill composed of extract of damiana, in combination with phosphorus and nuxvomica, which has produced, in my practice, more satisfactory results than I have obtained from other remedies.—GORDON G. JONES, F. R. C. S. EDIN, ETC., *Surgeon to the Hospital for Urinary Diseases, Soho, W.*

HE WHO assists the physician benefits the race. Use Georgia Bromine Lithia Water, Doctor.

WE CALL the attention of our readers to the advertisement of The Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This firm was established forty-five years ago, and enjoys a widespread reputation as a sound, honest, reliable business house. We do not hesitate to endorse their preparations as being all they claim for them.

LISTERINE.—The *British Medical Journal* of May 3, 1890, says: "We have received * * * a specimen of a preparation manufactured by the Lambert Pharmacal Co., St. Louis, U. S. A. According to the formula given, it contains the following antiseptics: Thyme, eucalyptus, baptisia, gaultheria, mentha arvensis and benzo-boracic acid. It is a clear liquid with an aromatic odor, pungent taste, and miscible in all proportions with water. We have experimentally proved that it is a powerful antiseptic, preventing the development of bacteria and decomposition of vegetable infusions. Listerine is certainly a very elegant preparation and will be found an agreeable antiseptic either for internal or external use." It is certainly satisfactory in the extreme to note the appreciation that the efforts of American pharmacists meet with abroad. Testimony of the character given by the *British Medical Journal* should carry very great weight with it.—*Occidental Med. Times.*—June 1890

G. W. WATTS, M. D., Auxvasse, Mo., says: I find Celerina very useful in cases of old persons whose digestive powers are failing, and in the convalescing period of those old persons from acute diseases such as pneumonia, bronchitis, gastro-enteric troubles, etc. In two cases recently treated of this kind Celerina seemed to restore both the nervous and digestive system. Both of these cases were very old persons, they are now apparently well.

BOWDEN LITHIA WATER—under seal—by the gallon. Doctor, try it.

INSOMNIA OF HYSTERIA.—

R. Peacock's Bromides.....4 oz.
 Celerina [Rio] 2 oz.
 M. Sig. Teaspoonful every two hours until
 sleep is produced.

A REMEDY FOR BRAIN FAG.—The statement has been made that more business and professional men are breaking down from overwork and exhausted nerve power than from any other known cause. The high pressure of the times, and the sharpness of the struggle for wealth or position lead men to overestimate and overtax their powers of endurance, and in spite of warnings they persist in keeping up the self-imposed delusion until there comes either a physical or mental breakdown, or both. Every physician has knowledge of such cases. We have in mind the case of a professor of music in this city who has a national reputation. One especially distressing feature of his case was "paroxysms of fright" with which he awakened each morning at four, and the dread of which haunted and depressed him during the day. Complete relief from all responsibility was insisted upon, and the usual remedies for nerve exhaustion were given regularly and persistently, but they seemed to give only negative results. He gained in flesh but not in nervous force and steadiness. At length he was ordered Freligh's tonic in ten drop doses three times in the day, and in a very brief time marked improvement was apparent. He now regards himself as fully restored and has gone away for a month, much against his will as he protested that the continued rest was needless. We have used this remedy—the formula of which is freely given—in a variety of nervous disorders with great satisfaction, and should still esteem it highly were it only for its well nigh marvelous effect in the above case. (*Mass. Med. Journal, April, 1890.*)

REMARKABLE FECUNDITY.—I was called to see Mrs. E. T. Page, January 10th, 1890, about 4 o'clock A. M.; found her in labor and at full time, although she assured me that her "time" was six weeks ahead. At 8 o'clock A. M. I delivered her of a girl baby; I found there were triplets, and so informed her. At 11 A. M. I delivered her of the second girl. * * * This child was "still-born," and after considerable effort by artificial respiration it breathed and came around "all right." The third girl was born at 11:40 A. M. This was the smallest one of the four. In attempting to take away placenta, to my astonishment I found the feet of another child. At 1 P. M. this one was born; the head of this child got firmly impacted at lower straight, and it was with a great deal of difficulty and much patient effort that it was finally disengaged. They weighed at birth in the aggregate nineteen and a half pounds without clothing: first weighed six pounds; second five pounds; third four and a half pounds; fourth four pounds. In the country, and "backwoods" at that, it was impossible to procure a "wet nurse," so with the little help we could control, and feeding the babies on "Reed & Carnrick's Infant Food," they thrived well. From using all the foods on the market I long since found that the above food possessed some qualities that I failed to find in the others. * * *

The birth of quadruplets is not so remarkable, but that they should live and thrive as these have done, is. In about 375,000 births there are quadruplets, and it is a remarkable fact that they always die. Will some of my brother M. D.'s give us their experience with quadruplets?—J. DELEON, M. D., *Ingersoll, Texas.*

BUFFALO LITHIA WATER.

NATURE'S GREAT REMEDY

— IN —

Bright's Disease, Gout, Rheumatism, Dyspepsia, Etc.

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DR. THOMAS H. BUCKLER, of Paris (formerly of Baltimore), Suggester of Lithia as a Solvent for Uric Acid: "Nothing I could say would add to the well-known reputation of the Buffalo Lithia Water. I have frequently used it with good results in Uric Acid Diathesis, Rheumatism, and Gout, and with this object I have ordered it to Europe from Coleman & Rogers, of Baltimore. Lithia is in no form so valuable as where it exists in the Carbonate (the form in which it is found in the Buffalo Lithia Water), Nature's mode of solution and division in water which has passed through Lepidolite and Spondumine Mineral formation."

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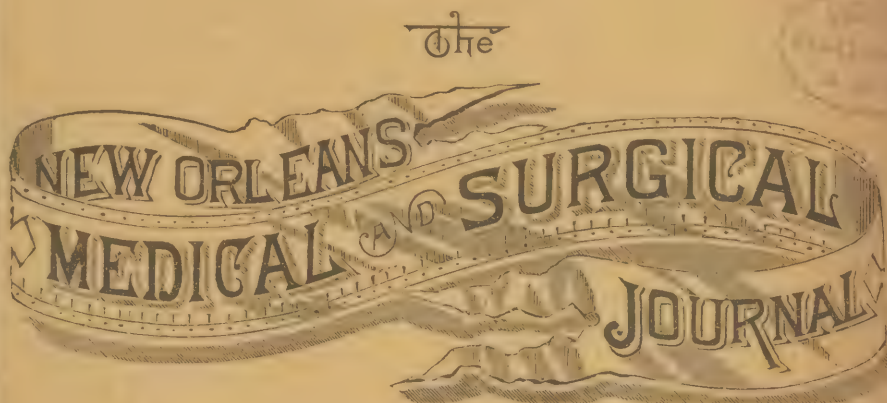
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No. 2.

*Pantheum seposita distat inertia
Celata virtus.*—HORACE



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TABLE OF CONTENTS.

	PAGE.		PAGE.
The Present Status of the Operations of Intestinal Anastomosis and Enterorrhaphy—By Rudolph Matas, M. D.	97	The Regulation of Medical Practice in Japan (and in Louisiana)	157
Abscess of the Liver—two cases, with Remarks—By J. J. Bland, M. D.	132	SURGERY	161
Vienna Letter	140	Medicine	157
London Letter	145	Book Reviews and Notices	168
A Protest against Ignorant Criticism	140	Medical Items	173
That Medical Legislation	150	Mortuary Report	171
A case of Arsenical Poisoning	151	Meteorological Summary, June, 1890	172
		Publishers' Department	173

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ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

THE PRESENT STATUS OF THE OPERATIONS OF INTESTINAL ANASTOMOSIS AND ENTERORRHAPHY.

AND

THE COMPARATIVE MERITS OF THE VARIOUS "AIDS" THAT HAVE BEEN RECENTLY SUGGESTED IN THE PERFORMANCE OF THESE OPERATIONS.*

By RUDOLPH MATAS, M. D.,

Visiting Surgeon Charity Hospital; Demonstrator of Anatomy, Medical Department Tulane University of Louisiana; Instructor in Operative and Clinical Surgery, New Orleans Polyclinic, etc.

Notwithstanding the fact that Dr. Senn first acquainted the surgical world with the results of his numerous and important discoveries in the domain of intestinal surgery at the Ninth International Medical Congress, held September, 1887, it may be said that their full import and value was not generally realized until the conclusion of the memorable series of papers on this subject, which appeared in monthly series in the *Annals of Surgery* during the first half of 1888. It was only in the latter part of that year, after the enormous magnitude of the work done was laid in detail before the public, that distinct evidences of a thorough understanding of his ideas and methods, and of their clinical application by others, began to appear on record. So that it may be truly stated that the general work of clinical

* Read before the Orleans Parish Medical Society, June 30, 1890.

and experimental corroboration was not seriously started until the beginning of 1889. Since January, 1889, to the present date, May 20, 1890, a short period of only seventeen months, the interest developed in the subject of intestinal surgery has been simply extraordinary, and the work being done in the way of testing, comparing, and modifying Senn's methods, both at the bedside and in the laboratory, is comparable only to a surgical revival which has hardly a parallel in the unparalleled history of abdominal surgery. In fact, the published evidences of clinical as well as experimental confirmation of Senn's researches have accumulated in such rapid and impressive succession, that no better acknowledgment, no more eloquent tribute, to the solid and enduring merit of this investigator's splendid work could be desired.

Of the new and revolutionizing ideas and practices which we owe to Dr. Senn, perhaps none have elicited more attention and have been productive of more fruitful results than his improved method of performing the old and formerly difficult operation of intestinal anastomosis* and enterorrhaphy.

By the introduction of the decalcified bone plate, he has reduced an unusually difficult and fatal procedure to the category of the simplest and most practical operations. It is by this eminently practical and useful turn that he has given to what was originally an unpractical and at best a hazardous procedure, that the attitude of the general surgeon toward many formidable and hopeless pathological conditions of the intestinal tract has been revolutionized; it is mainly for this reason that we, who are actively engaged in the field of surgical labor, have

* "By an intestinal anastomosis we understand a condition of the intestinal canal where, on account of an obstruction or complete occlusion, the intestinal contents are directed into a segment of the bowel below the seat of the obstruction or occlusion, through a fistulous opening between the bowel above and below the seat of partial or complete occlusion. The idea of establishing such a communication between the bowel above and below the seat of obstruction originated with Maisonneuve, who, without testing the new procedure first on animals, operated on two cases; but as the result in each case was fatal, he seems to have become discouraged and abandoned the operation, and never published the communication on this subject which he had in preparation. In the Surgical Society of Paris, his proposition met with violent opposition from his contemporaries, who argued that the excluded portion of the intestine would become the seat of fecal accumulation, which, even if the operation were a success, would subsequently destroy the life of the patient. For a long time the operation was completely forgotten, until E. Hahn, of Berlin, very recently alluded to it again in commenting on his two cases of excision of the colon where circular enterorrhaphy could not be performed and where an artificial anus was established. Both patients recovered from the operation, but all attempts to close the preternatural opening proved futile."—Senn, *Annals of Surgery*, January-June, 1888.

eagerly welcomed it as a new and powerful aid in our work of intervention against disease.

Perhaps no illustration of the altered aspect of the surgical mind and of the improved situation brought about by the application of the new method of securing anastomosis could be offered than by instituting a comparison between the operation of gastro-enterostomy before and after the introduction of the Senn method. From the date of Wölfler's first operation, on September 27, 1881, to May 14, 1889, a period of over eight years, Mr. Herbert Page, of London,* was able to collect the reports of thirty-eight cases, furnished by different operators and performed by the tedious and unaided Czerny-Lembert stitch. If we exclude two fatal cases from Page's table, in which pylorotomy was done conjointly with gastro-enterostomy, thirty-six cases of pure gastro-enterostomy will remain to be studied. Of these thirty-six cases, fifteen were fatal, directly or indirectly, as the result of the operation. Collapse was the most frequent cause of death. The mortality, therefore, by the old, unaided stitch method is 42.8 per cent.

That this is the correct statement of the mortality of the old operation (by unaided suture), even when performed by the most experienced operators, is confirmed by the most recent contribution of Von Hacker, of Vienna.† This report embodies twenty-one cases of gastro-enterostomy, operated by Wölfler's and Von Hacker's methods. Of the eight cases operated by Wölfler's method, four recovered and four died; of the thirteen operated by Hacker's method, seven recovered and six died. This amounts to about 47 per cent, and confirms the correctness of Page's estimate, and, furthermore, proves the fatality of the old operation even when it is performed by the most experienced hands. On the other hand, I have not had much difficulty in procuring the records of eighteen cases of uncomplicated gastro-enterostomy, performed by different operators in this country and Great Britain, with a mortality of three cases, or about 16 per cent. These operations have been performed in the course of the last eighteen months, and all,

*Proceedings Royal Medical and Chirurgical Society of London. *British Medical Journal*, May 18, 1889. Vol. I, pp. 1114-15.

†Transactions Imperio-Royal Society of Vienna, Correspondence *Semaine Medicale* May 3, 1890.

with the exception of four cases, with the aid of Senn's decalcified bone plates, the other four cases having been operated by the Senn principle, only that catgut rings were substituted for the bone plates. I have purposely avoided the cases of gastro-enterostomy which have been complicated with pylorotomy, as in Bull's recent successful case and Tuholske's fatal case. I have also excluded Rawdon's interesting case, in which, after pylorotomy for malignant disease, this operator performed a direct gastro-duodenostomy, with the aid of decalcified bone plates, the case ending in complete recovery. The collection of gastro-enterostomies alone is large enough, however, to show, first, the increased confidence with which operators have attacked these otherwise hopeless cases, and second, to emphasize the immense superiority of the present improved and aided gastro-enterostomy over the old operation, when regarded from the standpoint of the immediate operative results alone.

Furthermore, the present estimate of the mortality of gastro-enterostomy, as performed on the human subject, clearly confirms the anticipations held out by the same operation as performed on dogs, the mortality of the operation in dogs being at present about equal to that in man. Thus, out of four dogs operated by Senn, two by Jessett, three by Brokaw, and two by Dr. Michinard and myself, in all eleven cases, there were two deaths, or a mortality of about 11.2 per cent.

Without attempting to discuss in this communication the merits or demerits of simple gastro-enterostomy as a surgical expedient for the relief of pyloric cancer or other conditions of the stomach, I have endeavored to review, if only briefly, the work done in this restricted field during the last eighteen months, because it is thereby more convenient for me to illustrate the progress accomplished and to bring into relief the new life that has been introduced into the practice of intestinal operations by the introduction of the new technical improvements due to Senn. To review the whole field of their application and the experimental work that has been done to test or confirm the advantages of the Senn method would be to review the field of intestinal if not abdominal surgery, and to consume your time with considerations which would prove burdensome, since the work has been done ably enough by others, and,

indeed, too recently, as a glance at the bibliographic index which is appended will sufficiently attest.

Notwithstanding the fact that the consensus of surgical opinion, as gleaned from the preceding brief summary of the contributions of the past eighteen months in the restricted field of gastro-enterostomy, is unanimously favorable to, and confirmatory of, the superiority of Senn's method of performing anastomosis, there are still some points connected with this operation and with that of enterorrhaphy, in its general and special applications which are still open to discussion, and being debatable can be profitably presented to this meeting for consideration. The points referred to mostly involve questions of technical detail and do not affect the fundamental feature of Senn's method, which, in its essence, consists in securing *rapid, extensive, and firm* serous apposition of the confronted intestines with the aid of intra-intestinal decalcified bone plates which being held together in apposition, by sutures which transfix the intestinal walls, act in the manner of intra-intestinal clamps, which have the final advantage of being digested and absorbed.

In order that these points may be brought out in a manner more favorable for discussion, I will draw up a series of propositions which will be followed, whenever necessary, with appropriate commentaries, based on the evidence furnished by clinical and experimental work.

In explanation of my personal opinions on this subject I will state that they are based largely on a series of incomplete experiments on dogs, which for some months past have been jointly conducted with my friend, Dr. Paul Michinard, and which have thus far enabled us to study most of the applications of the operation of anastomosis, as it has been suggested for the relief of disease in man. While our experiments were not directed solely to test the value of Senn's method or its modifications, still we have directed special attention to them, and we have obtained certain results which we believe will warrant the conclusions that we have arrived at.

PROPOSITION I.—The operation for securing intestinal anastomosis, as performed with the aid of the decalcified bone plate, is decidedly superior to the old and tedious method

which secures the same result with the unaided Lembert or Czerny-Lembert stitch.

PROPOSITION 2.—The superiority of Senn's method of securing anastomosis lies (1) in the economy of sutures which it allows, thus saving time; (2) in the large serous surface which it brings in contact, thus facilitating rapid adhesion; (3) in the excellent basis which the intra-intestinal support affords for the ready application of the otherwise slow Lembert stitch.

Remarks.—To any one familiar with the practical application of both the unaided Czerny-Lembert method of practising enterorrhaphy and the Senn method, the truth of these two propositions will appear too axiomatic to require further demonstration or illustration. In my "Remarks on Circular Enterorrhaphy, etc.," published in the Louisiana State Medical Society's Transactions for 1889, p. 345 (vide this journal for 1889), I then stated: "The efficiency of Senn's discs has now been too often demonstrated, both experimentally and clinically, to require for them more than a simple allusion as a most valuable and time-saving device in the performance of intestinal anastomosis." Since that time, April, 1889, the clinical and experimental evidence that has accumulated only serves to confirm this statement, and to emphasize the fact that the principle of intra-intestinal support, which is the most essential feature of the Senn method, has permanently thrown the weight of technical advantage on the side of this method over the old unaided method. The statistics of the new gastro-enterostomies already referred to in the preliminary remarks alone prove this. There are some new points however, which are connected with the manufacture of the bone discs and their mode of application which should be referred to under these propositions, especially since the object of this paper is to compare the relative merits of this decalcified bone plate with the substitutes that have been offered for it. In his latest paper, "Two Cases of Resection of the Cæcum for Carcinoma, with Remarks on Intestinal Anastomosis in the Ileo-Cæcal Region," *Journal American Medical Association*, June 14, 1890, Senn states:

"After having tried all kinds of material, organic and inorganic, absorbable and inabsorbable, for making the apposition

plates, I have finally settled on decalcified bone as the most suitable material. In preparing the plates the compact layer of an ox's femur or tibia is cut with a fine saw into oval plates, $\frac{1}{4}$ of an inch in thickness, $2\frac{1}{2}$ to 3 inches in length, and 1 inch in width. The plates are then decalcified in a 10 per cent solution of hydrochloric acid, changed every twenty-four hours, until they have been sufficiently soft, so that they can be bent in any direction without fracturing. After decalcification they are washed and immersed for a short time in a weak solution of caustic potash, so as to remove the acid. Until quite recently I dried the plates between two pieces of tin, so as to keep the plates from warping during the drying process. The central opening and perforations for the threads were made after the plates were dry. Experience has taught me that it is unsafe to use material for plates which, when exposed to the fluids of the intestinal canal, will imbibe a sufficient amount of fluid to increase to two or three times in thickness, as such increase in the thickness of the plates may cause a sufficient degree of pressure to cause gangrene of the parts included between them. This happened in at least two of my gastro-enterostomies. Since then I have not dried the plates, but keep them after decalcification in a solution of equal parts of alcohol, glycerine, and water, which keeps them in a pliable, soft condition, and such plates undergo no change in size after their introduction into the stomach and intestine until they are gradually removed by absorption and disintegration from the third to the tenth day. After the acid has been removed the central oval opening can be readily made with a sharp penknife, and the four perforations around it for threads are made with a fine drill, and after the plate is threaded it is kept ready for use in the solution first mentioned.

“Any one conversant with the manner in which the plates are threaded can keep them in the solution until they are needed. When the plates are to be used they are worked in a 2 per cent carbolic acid solution and the threads or sutures attached by threading two fine sewing needles, each with a piece of aseptic silk, twenty-four inches in length, which are tied together; the knots become the ends of the end sutures, while the middle of each thread holds a needle and becomes the terminal part of the lateral or fixation sutures. The fastening of the threads upon the plate is done by the lock stitch by another thread passing through the perforations in the shape of a loop and fastened at the back.”

Dr. Senn now uses three different sizes of the plates. The largest size is used in gastro-enterostomy, the second for intestinal anastomosis, and the smallest plates are in

tended to be used in operations on children in cases of congenital stenosis of the intestines, invagination, and other forms of intestinal obstruction, where it becomes necessary to make an intestinal anastomosis. As a rule the central opening in the plate should correspond to the lumen of the organ which has become partially or completely obliterated by the cause which has produced the obstruction. Thus in gastro-enterostomy the perforation in the plate should be as large as the lumen of a normal pylorus. In ileo-colostomy it should correspond in size with the lumen of the ileum. I have the pleasure of exhibiting to you the three different sizes of bone plates made for Dr. Senn, and which I have just received from the Messrs. Schorse & Co., 302 Chestnut street, Milwaukee, who make them after the directions given by Dr. Senn. These plates are preserved in a moist state, ready threaded, with four straight, self-threading Hagedorn needles to each pair. The price for each pair is \$2.00, exclusive of express charges. The cost of these plates is, therefore, an item worthy of consideration, not so much in private practice but in conducting experiments. Of course with some patience and practice they can be made almost as nicely as by the experienced manufacturer, and for practising the operations for which they are used, on animals, it is plain that ordinarily the operator must secure plates that will be less expensive. For this reason the suggestion recently made by Stamm, of Fremont, Ohio, is a good one, *i. e.*, to cut out plates from the incompletely ossified scapula of the veal, which are very quickly decalcified and make very efficient substitutes for the bone plates made from the hard femur or tibia of the adult animal. I show you two plates made by myself after Stamm's suggestion, and which I can assure you have not given me much trouble to prepare. There are other considerations of a critical character to be made on the Senn plate, but these will follow more appropriately after the following proposition:

PROPOSITION 3.—The decalcified bone plate is not indispensable to the successful performance of the aided (Senn's) operation of anastomosis, and other organic material, especially catgut, can be safely used in its stead to secure the ready coaptation of the serous surfaces.

Remarks.—This is probably the most debatable proposition of the series. In order to appreciate the reasons for these differences, it will be necessary to review briefly the history of the substitutes that have been offered for the Senn bone plate. Abbe, of New York, was the first surgeon who criticised the bone plate as aid material, in an article in the *New York Medical Journal*, for March 23, 1889. In this paper Abbe reported a case in which intestinal anastomosis was successfully performed with the aid of the bone plates, and suggested the substitution of "rings made of the heaviest catgut, quite as firm and absorbable as the softened bone." Abbe objected, that (1) the plates can not be easily improvised and are not always readily procured: (2) that the size and lumen of the plates is constant, narrow, and can not be readily adapted to special cases, owing to the variable size of even the normal intestines; (3) the rings if not thoroughly decalcified may not be absorbed, and may give rise to obstructive symptoms like any foreign body.

Notwithstanding the recent modifications of the bone plate, as described by Senn and already referred to under proposition 4, it is certain that Abbe's objections still hold with as much force at the present moment as when they were first urged, and as simplicity, when combined with equal efficiency, is always a desideratum worthy of encouragement, we will at once inquire into the results accomplished with the Abbe substitute and those that were offered subsequently by others. The question as to the relative merits of the decalcified bone plate and its substitutes we shall reserve for a later moment, when Dr. Senn's answer to the objections that have given birth to these substitutes will also be considered and commented upon. At present the question is, what are the substitutes offered for decalcified bone and what is the evidence in favor of their efficiency and safety?

I now show you a ring made after the first Abbe model.*

* The latest instructions given by Abbe to make his catgut ring (*Medical News*, June 1, 1890), are as follows: A moderately heavy catgut is chosen: taken from alcohol or juniper oil; it is wound loosely on a test-tube, and soaked in hot water. It soon kinks up, and were it not on a tube, could hardly be unraveled. After a while it is straightened out, allowed to untwist, wound again loosely, and soaked in hot water once more until it ceases to twist. It is then ready to make up into rings, which will lie perfectly flat. Eight or ten turns over two pins, stuck in a cork, two inches apart, will make a bundle somewhat smaller than a lead pencil. These may be tied at four places, to secure the strands parallel while being wound around like a cable, with a continuous piece of the same catgut. The threads, armed with needles, are attached in the manner shown in the figure.

and which is certainly not difficult to improvise. Abbe applied his ring in several experiments on dogs, and succeeded perfectly in obtaining intestinal anastomatic communications with them. He subsequently repeated the operation in a successful case of enterectomy, substituting his catgut rings for the bone plates (*Medical News*, June 1, 1889), thus securing clinical evidence in proof of the efficacy of his rings. Since that time the Abbe ring has been used by McBurney, of New York, in a gastro-enterostomy for cancer of the pylorus, the patient dying twelve hours after the operation (quoted by Abbe, *Medical News*, June 1, 1889). It has also been used in two successful gastro-enterostomies by Dr. Weir, of New York (one for malignant pyloric stenosis and the other as a substitute for Loretta's operation, *Medical News*, December 14, 1889, and *New York Medical Record*, 1889). Once also, by Dr. Manly, in a colectomy for malignant disease, lateral enterorrhaphy having been performed with Abbe's rings (*New York Medical Journal*, April 19, 1890), and more lately by Dr. Bull in a complete pylorotomy, in which the connections between the stomach and duodenum were permanently discontinued and communication between the stomach and intestine reestablished by performing gastro-enterostomy with Abbe's rings (*New York Medical Record*, April 19, 1890). This case ended in the recovery of the patient.

Therefore, if we sum up the cases recorded, we will find that the Abbe catgut ring has been used in the human subject:

Once by Abbe, recovery.

Once by McBurney, fatal.

Twice by Weir, recovery.

Once by Manly, fatal.

Once by Bull, recovery.

In all, six cases, with two deaths.

It is thus clinically and experimentally proven that Abbe's catgut rings can be effectually substituted for the bone plates.

If I should adopt the order in which the various substitutes for the Senn bone plate have been presented to the medical public, I should next claim your attention with a discussion of solid catgut ring, made of the heavy commercial gut known as "drum-snare" material, which I thought of independently,

and demonstrated to my classes in the Medical Department of Tulane University in 1888-'89, and in the New Orleans Polyclinic, session of 1890, before the publication of Abbe's paper. Brokaw, of St. Louis, who published an account of his segmented rubber ring shortly after the appearance of my paper, claims that he had experimented with a ring made of solid catgut eight months before the publication of my paper, which would make the date of his experiments appear two months earlier than my own. Since his ring is widely and favorably known, and has been applied both experimentally and clinically next in point of frequency after the Abbe ring, I shall give it immediate consideration, reserving an account of my own ring for the end of this part of the discussion, in which I desire to refer to some criticisms that have been made of it and also to present some of the experimental evidence in proof of its practical utility, etc. The Brokaw ring, made of segments of rubber drainage tubing and threaded with catgut strands, is now well known, and will require no further description than the exhibition of the specimen which I have placed in the collection before you. Though this ring was devised originally and independently by Brokaw in a paper read before the St. Louis Medical Society, September 21, 1889 (*International Journal of Surgery*, November, 1889), and even earlier, we find a suggestion of a similar ring in Abbe's lecture on Anastomosis before the Philadelphia County Medical Society, May 8, 1889, in which Abbe says:

"I devised a ring of rubber, made in segments fastened by catgut, which would fall apart after a few days, but abandoned that when I made a stiff one entirely of catgut," etc. (*vide Medical News*, June 1, p. 590).

The credit of utilizing drainage tubing and of experimentally showing the utility and practical value of this ring is entirely Brokaw's, however, and the experimental and clinical confirmation of its value gives it a distinct place as a worthy and really valuable substitute of the Senn plate; and as far as adaptability to clinical requirements and rapidity of construction are concerned, I do not hesitate to say that it is equal, if not superior, to any of the substitutes that have been offered for the Senn plate.

This ring has been used, according to Brokaw on dogs in fourteen cases of intestinal anastomosis, with three deaths; circular enterorrhaphy has been performed with it in fourteen cases, with seven deaths; duodeno-cholecystotomy, three cases and two deaths. In various other operations on dogs it has also been employed with perfect success. Dr. Benjamin P. Shimwell, of Philadelphia (*Medical News*, April 12, 1890), has largely experimented on dogs with these rings, and decidedly prefers them to Abbe's rings, which he considers to be theoretically good, but practically imperfect. The objection to them is that, like Senn's plates, they can not be made quickly in an emergency." In addition to this experimental proof of the efficacy of the Brokaw ring we find that two cases have been reported in which these rings were used in the human subject. One, a case of gastro-enterostomy for pyloric cancer, reported by Dr. Carson, of St. Louis (Brokaw, *Int. Journal of Surgery*, November, 1889), which ended successfully, and another, a case of pylorectomy for cancer, in which, after closing up the pyloric end of the stomach and duodenum separately, a gastro-enterostomy was performed. This patient died twenty-six hours after the operation, from causes which do not reflect on the merits of the ring used in the anastomosis (*vide* Tuholske, of St. Louis, *Medical News*, May 10, 1890).

We may conclude from this evidence that, as in the case of the Abbe catgut ring, the claims for the Brokaw's segmented rubber and catgut ring as a substitute for the decalcified bone plate are fully substantiated by experimental and clinical evidence.

The ingenious catgut mats and solid catgut plates suggested and described by Dr. Davis, of Birmingham, Ala., next claim our consideration, especially since this observer has largely and successfully experimented with this material on dogs. This author reports seventy-nine anastomotic operations with the catgut plates and mats, though with what percentage of results I am unable to state, as I have not read the author's original contribution to the Southern Surgical and Gynecological Society, which met in 1889, and this percentage is not detailed in the author's extensive article in the *Annals of Gynecology* for August, 1889, which I have con-

sulted. These "mats" have been tried clinically in a case of malignant disease requiring ileo-colostomy. Though the patient died of exhaustion twelve hours after the operation, the autopsy revealed nothing which could affect the merit or value of the mat. The mats have also been tried in a case of jejunio-ileostomy, which also ended fatally, and too early to permit judgment on the final efficacy of the mats.

The mats are ingeniously made, and doubtless could be utilized as successfully as Abbe's, Brokaw's, or my ring, in cases demanding anastomosis; still the great objection to them is that they are not easily made in an emergency as the other more substantial catgut substitutes which have been suggested. The catgut *plates* would appear *a priori* to be especially fitted for the work required of them. They are made of solid catgut sheets, and can be very quickly cut or punched out when the catgut sheets are at hand; furthermore, they present a large, flat surface for serous confrontation and adhesion, and in this way more closely resemble the Senn decalcified bone plate than anything else yet suggested. They are at present open to the objection that catgut compressed into plates is not easily procured, as I know by my complete failure to obtain it notwithstanding my direct application to Mr. Snowden, Dr. Davis's catgut manufacturer; but furthermore, as Senn has recently shown (in his paper on Resection of the Cæcum, etc., loc. cit.), because the plate is so hygroscopic that it becomes rapidly too soft and non-resistant to serve as an aid, and swells to such proportions that it endangers the vitality of the intestinal wall by exercising too much pressure at the suture points.

In completing the list of substitutes that have been offered for the Senn bone plate, I need only mention the solid rubber discs which were successfully employed by Penrose, of Philadelphia, in experiments on dogs (vide discussion following Abbe's paper, Philadelphia County Medical Society, May 8, 1889, *Medical News*), and the rings made of decalcified bone drainage tube threaded with catgut, and the prepared arteries also threaded with the same material that have been suggested by Brokaw, of St. Louis, in a paper in *Philadelphia Medical News*, for 1889. These substitutes have not been tried clinically, but there is no reason to doubt their efficiency. They

are certainly worthy of being counted among the resources of the surgeon in cases requiring anastomosis.

I have thus passed in review the different substitutes that have been offered by others for the decalcified bone plate; now permit me, in justice to myself, to say something in regard to the solid catgut ring made of "drum snare" gut and already referred to as the ring originally suggested and demonstrated by myself before the Louisiana State Medical Society, at its meeting in this city on April 10, 1889.

The ring which is exhibited in the collection before you is the same as the one which Dr. Paul Michinard and myself have tried quite extensively in the experiments on dogs which we have jointly conducted during the last few months. It is quite different from the ring originally presented to the Louisiana State Medical Society last year. While it is made of the same "drum snare" material, it differs from it very essentially in the fact that I now employ the catgut after it has been boiled, and, consequently, the tendency to kink and twist which characterizes the original twisted material is permanently and effectually removed. At the time when I first demonstrated the *technique* of circular enterorrhaphy and of anastomosis, with the aid of these rings, before the State Society, I had only experimented with the rings on the cadaver, and had not had occasion to observe the effect which prolonged immersion of the thick catgut in a watery medium has in disfiguring the rings. For this reason, I am much indebted to Brokaw for this criticism with which he summarily disposed of the ring and put it, metaphorically, *hors de combat*. This criticism led me to experiment and study considerably the hygroscopic properties of catgut, and on the conditions which modify them. In order to prevent the absorption of water, I tried the effects of preparatory saturation with various fixed and volatile oils, of varnishes, such as damar, copal, and gutta-percha; these simply retarded absorption, but in the end totally failed to prevent it, and with the failure came the inevitable coiling and distorting kink or twist; a tanning process was tried, chromicizing, etc., but all this failed, until I resorted, finally, to the simplest expedient which is always effective with thread-catgut, and that was, to boil the gut in water until it had com-

pletely uncoiled itself and had absorbed water to the fullest extent of its hygroscopic capacity. This result, much to my satisfaction, was accomplished by very few minutes' immersion in boiling water, when the gut swells to three times its original diameter and is reduced to one-third of its original length. Thus three feet of drum snare will, after two or three minutes' boiling, contract to one foot: and the cord which originally was about $3\frac{1}{2}$ millimeters in diameter will swell to 6 millimeters. After this result is obtained, the gut will remain permanently shortened, but will dry very rapidly and become as hard as wood. It may be then immersed indefinitely in water, and it will simply soften to the consistence of a solid rubber band, but will never show a disposition to become distorted by kinking or coiling. With a material thus prepared it is easy to make rings of any desired size, by simply cutting and shaping them; furthermore, they are made to retain their shape by simply inserting the free ends in a small piece of rubber tubing, which, acting as a clasp, is sufficient to keep the ring in shape; in order to secure the tubing permanently it will be safer to tie the ring to the tubing with silk thread. The ring is then ready to be mounted with the fundamental or perforating sutures, which should consist of four threads six or eight inches long, each holding a round milliner's needle of convenient size, and tied at equidistant points on the circle. When the ring is to be used it should be placed in a towel previously wrung out of a hot carbolized or aseptic solution, in which it will rapidly soften and swell to its maximum dimensions, and in this condition will be made to slip easily through a comparatively narrow slit in the intestine. It is preferable to use the ring soft because it then has attained its maximum hygroscopic diameter and there is no risk of subsequent swelling within the intestine; furthermore, while soft and of a rubber-like consistence, it is still sufficiently resisting to secure the ready coaptation of the opposed serous surfaces. When thus softened, a large ring can also be used to secure coaptation after partial enterectomies of the intestinal convexity for multiple gunshot wounds, as Brokaw first suggested; though it appears to me that the application of aids in these cases is, if not superfluous, at least not essential.

While studying the hygroscopic condition of catgut, I dis-

covered that the only kind of heavy catgut that will stand boiling without disintegrating or spoiling, is the cheapest (five cents per foot) catgut first recommended by me, *i. e.*, the crude commercial drum snares used for tightening drums, and not the heavy gut strings used for the bass violin, which Brokaw and others have erroneously regarded as identical with the above. The finer varieties of gut which are used as bass or violin strings are subjected to a sort of waxing process which totally unfits them for boiling, by disintegrating and making them totally worthless for any purpose. Not knowing this peculiarity, I recommended them in my first paper, owing to their apparent similarity to snare material, but since I have discovered my error I withdraw my recommendation and would warn those who should be tempted to try them against their use.

Having thus modified my original ring, I believe that the objections against it have been removed, and the experimental evidence that I have secured in the operations performed by Dr. Michinard and myself proves that they can be used as effectively as any of the catgut substitutes of the Senn bone plate. We have used this ring twice in gastro-enterostomy after pylor-ectomy; once in entero-enterostomy; once in ileo-colostomy; once in circular enterorrhaphy after colectomy, and once in circular enterorrhaphy after enterectomy.

We have had a perfect success in one of the gastro-enterostomies after pylor-ectomy, the animal living at this present date. In this case, a preliminary gastro-enterostomy was performed about two months ago; the secondary pylor-ectomy was performed over two weeks ago, the existence of a large and perfect gastro-duodenal fistula was verified, and an extensive resection of the pylorus and a portion of the duodenum and stomach performed; the stomach was completely isolated, and closed at the former pyloric end, and the pyloric end of the duodenum inverted and also closed. The animal made an excellent and uninterrupted recovery, and is to-day eating like any other dog, and shows no dyspeptic or digestive disturbances.

In the other gastro-enterostomy and pylor-ectomy, which was performed before a large class of students and under very disadvantageous circumstances, death followed twenty-four hours after the operation from hæmatemesis and hernial evagination from the rupture of the abdominal stitches after vomiting. In this case, no extravasation was found in the peritoneal

cavity; the catgut ring in the stomach was found undergoing rapid absorption, and would soon have undergone complete digestive disintegration; the anastomotic communication with the jejunum was perfect in so far as coaptation was concerned, but the peritoneal exudate was scant. The hemorrhage came from the mucosa, which had been trimmed at the pyloric end of the stomach too far below the serous section, and consequently was not efficiently compressed by the sutures.

In the entero-enterostomy, over four inches of intestine were removed; the two ends were inverted and closed into cul de sacs, and the continuity of the intestine restored by performing lateral anastomosis. The animal reacted well from the operation and appeared to be in excellent spirits and playful, when on the third day it died suddenly. Much to our regret, the animal was carted away in the garbage wagon before we could determine the cause of death by an autopsy.

The ileo-colostomy was very interesting in its results, and ended in recovery. As the sequelæ are given later on in the paper, the details are omitted here.

In the circular enterorrhaphy after colostomy, the resection was imprudently carried to excess. The whole transverse colon was excised; the ascending colon was united to the rectum directly as in circular enterorrhaphy, *i. e.*, lumen to lumen, and coaptation effected with my solid catgut rings. The animal stood the operation badly and expired twenty-four hours after; at the autopsy the rectum was found in a gangrenous condition from venous asphyxia, due probably to ligature of a hemorrhoidal or mesenteric vein; the circulation through the connected intestines was perfect and the joint showing no leakage; the rings were *in situ* and showing no sign of disintegration. The plastic exudate about the sutures was wanting, notwithstanding abundant scarification during the operation.

In addition to the preceding we have performed various other anastomotic operations, over ten cases in which the results have satisfied us that solid catgut ring made of boiled drum-snare material can be effectually substituted for decalcified bone plate.

Clinically, I have not had an opportunity of testing the value of my rings, and know of one case only, operated by Dr. J. D. Bloom, assistant house surgeon Charity Hospital, in which circular enterorrhaphy was performed with their aid after the resection of a large piece of gangrenous intestine, due to hernial strangulation. In this case the man was brought in an almost moribund condition to the hospital and the operation

had to be performed simply as a matter of duty. The man died a few hours after the operation, too early to test the merits of the rings.

We may now sum up in the order of their publication the various modifications that have been offered for the decalcified bone plate of N. Senn (International Medical Congress, September 5, 1887).

1. Rings made of catgut strands; Abbe, New York Surgical Society Proceedings, June 9, 1889.

2. Rings made of solid catgut, drum-snare material; Matas, Transactions Louisiana State Medical Society, April 10, 1889.

3. Solid rubber discs; Penrose, Transactions Philadelphia County Medical Society, May 8, 1889.

4. Mixed rubber and catgut rings; segmented rubber rings; Brokaw, St. Louis Medical Society, September 21, 1889.

5. Solid catgut plates and catgut mats; Davis, Proceedings Southern Surgical and Gynecological Association, August, 1889; *New York Medical Record*, November 30, 1889.

6. Rings made of decalcified bone drainage tube threaded with catgut; Brokaw, *Medical News*, 1889.

7. Rings made of ox arteries threaded with catgut strands; Brokaw, *Medical News*, loc. cit.

We have now completed the list of substitutes that have been offered for the decalcified bone plates originally introduced by Senn, and we believe that the evidence here collected substantially proves the correctness of our third proposition.

The important question that is now asked by the practical surgeon is: Do these substitutes constitute a real advance, an improvement, on the Senn plate; are they really superior to it? Should they be preferred by the operator in all cases to the bone plate, or are they merely *succedanea* which should be utilized only when the decalcified plate is not ready at hand? Or are there special indications for the use of either the bone plates or the substitutes?

Senn himself has most recently answered, or at least partially answered, these questions at the late meeting of the American Medical Association, held at Nashville, May 21, 1889, in his important paper already referred to, "Remarks on Intestinal Anastomosis, etc.," loc. cit. He says:

“ Objection has been made against the bone plates to the effect that they are not always at hand when needed. But like catgut, silk, drainage tubes, and other essential materials used in the treatment of wounds, they should be kept on hand, ready to be used in an emergency. The different kinds of rings devised by Abbe, Matas, and Brokaw, as substitutes for the bone plates, lack some of the most important advantages possessed by the plates. Catgut is a material which, when brought in contact with the alkaline secretion of the intestinal canal, becomes, in a few hours, so soft and macerated that it can not be relied upon as a support. All ring supports bring into apposition only a small area of serous surface, and the pressure is not *equally distributed*.* Davis catgut mats are superior to the catgut rings, but the material of which it is composed is so highly hygroscopic that, when acted upon by the intestinal contents, they swell up rapidly and become as soft as rag in a few hours. I immersed one of the plates which Dr. Davis kindly sent me in a warm solution of common salt, and in three hours it had increased to three times its former thickness, and had become so limpid that in the same condition in the intestinal canal it would furnish little or no support in maintaining uninterrupted apposition. The same objection applies to the catgut rings and catgut mats as to the dried bone plates, that when used in the dry state they increase rapidly in thickness from the imbibition of fluids, and, as the sutures are unyielding, the pressure thus produced may become a cause of pressure gangrene.

“ An extensive clinical experience and numerous experiments on animals have satisfied me that thus far no better material has been suggested for making approximation plates than decalcified bone. Decalcified bone plates kept moist in an antiseptic solution do not increase in thickness by imbibition of fluids when used in the stomach or intestinal canal, and they serve as an efficient mechanical support in bringing together and maintaining accurate coaptation of large serous surfaces which it is intended to unite in establishing an intestinal anastomosis. The decalcified bone plates can be relied upon in maintaining equable surface pressure upon the tissues interposed between them for at least three or four days, which is

* The italics are mine.—R. M.

the time required in obtaining a sufficiently firm union by cell proliferation from the apposed serous surfaces. Indestructible and unabsorbable material should never be used in the preparation of the approximation plates, as such substances in the stomach or intestines, where they are used, may cause irritation, or even ulceration and perforation; or they may pass on and become impacted in the narrowed portion of the bowel. Dr. Stamm, of Fremont, Ohio, made plates of the thin portions of the scapula of a calf, and used them in a gastro-enterostomy for carcinoma of the pylorus. The patient died forty days after the operation, and at the necropsy the plate inserted into the stomach was found unchanged in the viscus."

In reply to Dr. Senn we would state that the danger of pressure gangrene from secondary swelling of the catgut is precluded by the rubber tubing in the Brokaw ring which does not materially increase in size, and by the fact that a preliminary immersion in a watery medium will also obviate this risk without seriously affecting the firmness of the material in my solid catgut ring; furthermore, the experimental and clinical evidence accumulated in favor of the Abbe, Brokaw, Davis, and the author's ring would prove that these substitutes are really efficient, and can be successfully and advantageously utilized in practice. Still, the other points urged by Dr. Senn are well taken, in my estimation, and it would be unreasonable to deny (1) that the exceeding rapidity with which catgut is absorbed, and (2) the smaller surface that rings of all descriptions bring together for adhesion, make them inferior to the decalcified bone plate,* which should be regarded, if from these standpoints alone, as the superior material in all cases of enterorrhaphy, excepting, perhaps, in those instances of circular resection of the bowel in which *lumen to lumen* enterorrhaphy is aimed at. It should be remembered that in the performance of intestinal suture, whether for anastomosis or for circular enterorrhaphy by the direct method, the great merit and advantage claimed for the *aided* methods over the unaided, simple stitch procedures is in the greater rapidity as well as security with which the aided methods can be executed. The time-

* As my colleague, Dr. Parham, has suggested, this objection can be partially overcome by nesting the rings into each other, thus forming a simple and substantial mat, which would be held together by silk or catgut threads. These mats would be easier to make and would be more resisting than the Davis mats.

saving advantage rests on two points: (1) That a minimum number of stitches is needed when the aids are employed, and (2) that a *firm basis* is given the operator by the use of an intra-intestinal support which allows of a more rapid stitching than when no such support is employed. Now, the decalcified bone plate combines these advantages in addition to those previously referred to in proposition 2 and elsewhere, and for this reason is the best material, when rapidity of execution as well as safety are the main desiderata, as by the use of these plates the surgeon need not be so particular in perfecting the external serous suture once the apposition of the plates has been thoroughly effected by the transfixion stitches. On the other hand, it can be urged that since this peripheral security (Lembert) stitching is needed in all cases, that the time lost in applying a few more stitches will not seriously affect the result in most instances, and that consequently the aids made of more digestible and absorbable material can be advantageously employed as ephemeral supports in expediting the ordinary Lembert suture.* With this view I fully concur, and believe that by accomplishing this result alone the technique of intestinal suture has been very much advanced by the introduction of the various aids referred to.

As a result of the preceding considerations we may, therefore, draw the following propositions:

PROPOSITION 4.—While the various substitutes, Abbe's, Brokaw's, Davis's, and the author's, can be successfully substituted for the decalcified bone plate, the latter is the preferable material, the others being regarded in the light of *succedanea*, to be remembered in emergencies and special conditions.

PROPOSITION 5.—That where the digestive and absorbent surfaces are especially active, as in operations in the upper portions of the gastro-intestinal tract (stomach, duodenum, and jejunum), it is especially indicated to use less absorbable material—decalcified bone; and

PROPOSITION 6.—Highly absorbable material (catgut) can

* That the need for this intra-intestinal support as a basis for suturing has long been felt by surgeons is well demonstrated by the numerous devices which have been suggested *ad hoc*, and used by surgeons long before the introduction of the Senn plate. These cylinders of gelatine, of dough (Hohenhauser), the trachea of animals, cartilaginous cylinders, decalcified bone cylinders (Neuber), Treves's inflation rubber bag, etc., all emphasize this want.

only be used with safety in the above-mentioned territory when the ring or plate is used as a mere technical aid, not as a durable intra-intestinal support, but as a means of expediting and perfecting the peripheral Lembert or continued stitch.

Remarks.—That the absorption of the aid material bears a direct relation to the digestive activity of the region in which it is placed, is well illustrated in the operations performed by Dr. Michinard and myself. In one dog, twenty-four hours after gastro-enterostomy, the solid catgut ring in the gastric side had been almost wholly disintegrated and absorbed; in another canine, twenty-four hours after colectomy with circular enterorrhaphy, the two solid catgut rings used were found intact, and showed no trace of digestive action or disintegration.

PROPOSITION 7.—That absolute reliance is not to be placed on fixed or definite periods for the formation of plastic peritoneal exudation, and that while this protecting exudation takes place in two, four, and twelve hours, it may be very remarkably retarded.

Remarks.—This is illustrated by the case of a dog (apparently in excellent health), in which we performed ileo-colostomy with the aid of my solid catgut rings. At the autopsy, *one week* after, no visible trace of plastic exudation could be discovered, notwithstanding the fact that the animal appeared to have recovered perfectly from the operation. In this case the anastomotic communication between the bowels failed to form, notwithstanding very thorough scarification of the serosa; the incisions in the bowels having closed by muscular contraction around the everted mucosa and final agglutination of the serous edges. The rings had completely disappeared, and with them the transfixion sutures; the intestines were held together in confrontation by a few interrupted Lembert stitches, about which there was not the least appearance of exudation.

This animal was reoperated to verify the anastomosis, and had it not been for this revelation we would have credited this case to the list of the successful anastomosis. In order to control the operative results, it is important in experimentation that even after the apparently perfect recovery of an animal that a second examination be made in order to verify the result, which may be quite the reverse of the expectation.

PROPOSITION 8.—Gastrostomy: This operation is much simplified and expedited by the adoption of the ring principle, and, as at present modified, could be advantageously substituted for the older and unaided stitch methods hitherto adopted in its performance.

Remarks.—This operation may be performed with the aid of one ring, as originally suggested by Prewitt, of St. Louis, Mo., and as it has been tried on dogs successfully by Brokaw. With the aid of two rings I believe the operation can be performed with as much rapidity and greater security. The stomach is drawn out through the usual abdominal incision and an incision made into it sufficiently large to admit a ring two to three inches in diameter. This ring should be made of rubber drainage tubing packed with catgut strands, or with solid catgut drum snare material, after my model; large decalcified bone plates (Senn's) could also be used, were it not that the incision required to introduce them in the stomach would be too large. From six to eight apposition double threads, armed with one milliner's needle each, should be attached to the rubber tubing, not to the catgut contained in the tubing, as in the ordinary ring, but to the rubber itself; strong silk should always be used. Each needle is now passed through the walls of the stomach, traction being made to see that the ring rests well in place, and the stomach is pushed back into the abdominal cavity. The needles are then passed through the whole thickness of the abdominal walls and tied as in the manner of a quill suture to an external segmented rubber ring or one made of solid catgut after my model. Finally, as suggested by Brokaw, the margins of the opening in the stomach should be stitched to the skin of the abdominal incision. By Prewitt's method the transfixion threads are simply tied in pairs over the skin of the abdominal surface. In either case, the feeding may be commenced immediately after the operation.

This operation has never been tried clinically, though it has been successfully performed on dogs.

In cases of carcinoma of the stomach not fitted for gastrectomy, Bernay's operation by which the growth is curetted through an incision in the stomach, will be greatly expedited by resorting to this method of securing the stomach to the

abdominal incision, where the organ will remain adherent and always accessible for secondary repetitions of the curetting treatment.

PROPOSITION 9.—The operation of pylorectomy has been much simplified by the introduction of Senn's method, and judging by the present outlook the mortality of this most formidable procedure will be much diminished in future; the greater probability of operative success will in future encourage the surgeon to earlier and more radical interference in these desperate cases.

Remarks.—The continuity of the gastro-intestinal tract may be established after pylorectomy by either of the two methods recently suggested, viz: By direct gastro-duodenostomy, with the aid of Senn's plates; or by the closure of the gastric and duodenal ends, thus severing completely the normal gastro-duodenal connection and creating an artificial pylorus by the formation of a gastro-enterostomy with the aid of Senn's plates. The reason for preferring Senn's plates in this operation has already been stated, and the conditions under which more absorbable material can be substituted for these plates have been already stated elsewhere.

The recent case reported by Mr. Rawdon, of Liverpool (*vide Bibliography, et supra*), will illustrate the manner in which the decalcified bone plates are to be used when direct gastro-duodenostomy is aimed at after pylorectomy:

"The patient, male, aged fifty-six, was admitted to the Royal Southern Hospital, Liverpool, with well-marked symptoms of pyloric stenosis of some weeks' duration, and a small tumor was felt in the abdomen under the left rectus, a little above the umbilicus. Mr. Rawdon opened the peritoneum by a median incision about four inches in length, commencing one inch below the ensiform cartilage. The tumor proved to be a mass of carcinoma involving the pylorus and pyloric end of the stomach. There were no abnormal adhesions, and the parts were drawn out through the abdominal incision, when it was found that a third of the stomach had to be removed. The vessels coursing along the greater curvature were secured at the point where the line of incision was required, and the duodenum and the vessels immediately connected with it were compressed by a ligature of rubber tubing. The affected portion of the stomach was now excised, only one or two vessels in its walls requiring a ligature; the omental connections were

gathered up, transfixed, and the rubber tubing constricting the duodenum was removed, and two or three arteries were secured. The stomach wound was closed with continuous sutures of fine silk, except one inch at the greater curvature, which was left open to admit of the introduction of one of Dr. Senn's plates of decalcified bone. A second plate, cut circular, was passed into the duodenum and placed so as to lie across it, with the coats of the bowel overlapping the plate. The openings of the stomach and duodenum were now brought into apposition, and the corresponding ligatures on the two plates tied together, so that direct communication was established between the two viscera.

The parts were returned into the abdomen, and the wound closed in the usual way. The operation was completed in less than an hour; the patient made an uninterrupted recovery. He was supported by nutrient suppositories during the first week; he was then allowed a little pancreatinized cow's milk, and gradually returned to his ordinary diet. At the present time he is able to eat heartily without pain or other discomfort.

The other improved method of performing pylorotomy with the aid of gastro-enterostomy is well illustrated by the following successful case of Bull, of New York:

The operation was performed on a woman aged twenty-nine, suffering from carcinoma of the greater curvature and posterior wall of the stomach. The abdomen was opened by a median incision, and the gastro-hepatic and gastro-colic folds, the tumor, together with the pylorus and about one-quarter or about one-third of the pyloric end of the stomach, were then removed. The cut end of the duodenum was sutured so as to form a blind pouch, the stomach treated in like manner, and an anastomosis made with the jejunum near its commencement, by means of Abbe's catgut rings. The operation lasted three hours and a half. There was a serious fear of prostration at the end of the second hour, but at its close the patient rallied. All food by the mouth was withheld till the fourth day; no untoward symptoms were observed; on the seventh day the temperature and pulse were normal, liquid food had been taken freely, and the bowels had acted spontaneously. The patient's subsequent progress was in every way satisfactory, and on the twelfth day, the day of the last report, she was considered to be out of danger.

In regard to the special indications for these two operations it is difficult at present, in view of our very limited clinical experience with either, to formulate such rules as would assist the surgeon in deciding which should be accorded the preference in any given case.

Mr Jessett (*British Medical Journal*, May 10, 1890), has recently commented upon these two operative procedures.

This investigator found, in his experimental work, that the portion of the duodenum that was surrounded by peritoneum was so very short that it would have been impossible to have done the operation successfully.

The same difficulty would apply in most cases to the human being, as the first portion of the duodenum is only two inches long, and not more than two-thirds of this is completely surrounded by peritoneum, leaving, after allowing for a small portion which must of necessity be removed with the pylorus, only about one inch to deal with. This would be hardly enough to allow of a bone plate being introduced without putting a considerable drag upon the parts to be united. When, however, the pylorus becomes obstructed, and the stomach dilated, it seems to have the effect of elongating this first portion of the duodenum. "In such a case," says Jessett, "the plan put into practice by Dr. Rawdon is undoubtedly, to my mind, the best mode of operating." Should, however, this portion of the duodenum not be elongated, then the operation of invaginating and closing separately the divided gastro-duodenal ends, and creating a new pylorus by means of a gastro-enterostomy, as in the case of Dr. Bull, would be the preferable operation.

The first method thus far has one case, Rawdon's, on its list, and this was successful. The second method has two cases, Bull's and Tuholske's, one successful and one fatal.

PROPOSITION 10.—The operation of gastro-enterostomy by the Senn method is especially indicated in cases of cicatricial or non-malignant stenosis of the pylorus, as a more advantageous substitute for Loretta's stretching operation, Hahn's pyloric intubation, or the Heineke-Miculicz pyloro-plasty.

Remarks.—This proposition has been made very plain by Dr. Weir, of New York, who, in a successful case operated with Abbe's catgut plates (*Medical News*, Philadelphia, vol. lv. 666, 1889), has proved this to be a most rational procedure in such cases.

PROPOSITION 11.—It is the opinion of the writer, based on anatomical examinations and experimental evidence, that in gastro-enterostomy, the method of J. Wölfler, which aims to

secure the jejunum to the stomach, over the colon and great omentum, is a dangerous procedure which subjects the anastomotic connections to unnecessary strain, and, furthermore, physiologically excludes an unnecessary length of most active intestine. The method of Curvoisier and Von Hacker, by which the jejunum is connected to the stomach directly, after tearing or cutting a passage through the bloodless area of the transverse meso-colon, under the meso-colic arch of Riolan, is more commendable from the anatomical, physiological, and operative standpoints.

Remarks.—From experimental evidence and frequent operations on the cadaver, I am convinced that the tendency to form an obstructing eperon in the attached bowel is greater by Wölfler's method than by the trans-meso-colic operation. Contrary to the opinion of several writers, this operation is very easily performed on dogs, and judging by my experience on the human cadaver, there is no reason to doubt that the anastomosis can be performed just as quickly as by the supracolic route. It is easy to understand that when the mobility of the stomach is lost by excessive infiltration or adhesion, that Hacker's procedure should be more difficult of execution. In such cases Wölfler's method could be resorted to. The mortality by either method, as already referred to in the earlier part of this paper, is about equal, *i. e.*, nearly 50 per cent; but this is by the slow stitch methods; the new statistics are not available on this point, but it will doubtless be proven when further reports accumulate that the immediate operative dangers of gastro-enterostomy will not be increased by Hacker's trans-meso-colic method, whilst the post operative results will be much bettered.*

United clinical and experimental evidence condemn emphatically the method of Leucke, who, to expedite the operation of gastro-enterostomy, unites the first presenting portion of small intestine to the stomach. The surgeon should always *assure* himself that it is the jejunum that he is attaching to the stomach, and not another intestine. Repeated practice on the cadaver, and a free exposure of the parts, are much better

* Mr. Jessett, in his most recent contribution to the subject, July 12, 1890 (*vide index*), thoroughly concurs with this view.

and more reliable than Hahn's rules for finding the upper jejunum.

PROPOSITION 12.—*Circular Enterorrhaphy*.—The operation of circular enterorrhaphy is, in the light of *present* experimental and clinical experience, most promptly and securely performed by the invagination and complete closure of the divided intestinal ends with the aid of a continued or interrupted Lembert suture, the continuity of the intestinal canal being reestablished by the formation of an anastomotic opening with aid of Senn's decalcified plates, or the catgut ring substitutes. (Senn's method.) (*Vide* plates, Nos. 7, 8, 9, 10, which illustrate the operation as performed with Brokaw's rings or the author's, and plates Nos. 16 and 17 [ileo-colostomy], with Senn's bone plates.)

Remarks.—This method is particularly indicated in all cases in which the opposed intestinal diameters are different, such as in cases of intestinal obstruction in which the gut on the proximal side is much dilated and wider than on the distal side. The lumina being disproportionate, it would be difficult to unite the divided bowels mouth to mouth, and the only practically good method of promptly restoring the intestinal circulation after enterectomy would be by the anastomotic method. On the other hand, in cases of circular resection in which the opposed bowels are symmetrical, and the lumina equal, the quickest and simplest method of restoring the continuity of the bowels would be by circular enterorrhaphy by the author's method. *Vide* plates Nos. 11 and 12, illustrating the application of the author's catgut-snare ring. When the indications for this method are met (*i. e.*, equal lumina in confrontation), it is difficult to conceive of an easier method of performing anastomosis. Certainly, it is the most rapid and secure method that the author has practised on the cadaver, and it is impossible to understand what would be the serious objections against its adoption on the living subject. Unfortunately this method can not be tested experimentally on dogs, unless very large animals are operated upon, though even in large animals of this species it is impossible to overcome the great anatomical obstacles in the way of its performance. In the dog the muscularis of the intestine is relatively much

thicker and stronger than in man; so that immediately after circular division of the intestine the divided bowel contracts so thoroughly and spasmodically that it is even difficult to introduce a ring very much smaller than the intestinal lumen at the divided point. Furthermore, the elongated conical projection formed by the severed bowel end offers an insuperable barrier to the even coaptation of the confronted surfaces. After attempting this method on dogs, Dr. Michinard and myself promptly abandoned it as unpractical in this animal, in which even circular enterorrhaphy by the unaided Lembert method is extremely difficult and disadvantageous. It is not surprising, therefore, that Brokaw, in his fourteen experiments, should have met with a mortality of 50 per cent, though this experimenter, like ourselves, believes in the clinical excellence of this method. He very correctly says (*St. Louis Courier of Medicine*, p. 395, vol. ii, June, 1890): "This is without doubt the most rapid method of performing circular enterorrhaphy, and while my experiments upon the dog, with this method, were not as satisfactory as I had hoped (50 per cent died), on man the results will be far better; the amount of stenosis would not be more than by circular suturing with the unaided Lembert or Czerny-Lembert. In man for anatomical reasons, the apposition threads can be passed nearer the cut margins of the bowel. In man there would not likely be any formation of enterolithis; a liquid diet for a time would do away with that danger, which was the cause of death in several of my experiments," etc.

The details of the technique of this method are made plain enough by the illustrations, so that no further explanation is needed; besides these, however, the descriptive text is fully given in the author's "Remarks on Circular Enterorrhaphy," *loc. cit.*, April, 1889, in which this procedure was first presented to the profession (*vide* this journal, July, 1889). While the value of the experimental test is denied this method, in dogs, at least, the author feels satisfied that it has a great future before it, if is only tried in the operating room on the human subject.

PROPOSITION 13.—Enterorrhaphy after partial enterectomy for multiple gunshot and other injuries of the intestinal con-

vexity, may be, in special cases, advantageously performed by the aided method.

Remarks.—Brokaw and Davis have suggested that in injuries of the intestines which permitted of the closure of the wound without producing obstructive stenosis of the intestinal lumen, but which could not be closed without a partial sacrifice of the intestinal wall, that a large multi-segmented catgut-rubber ring (Brokaw) or catgut plates (Davis) could be utilized to approximate the pared surfaces of the wound, as is shown in the illustration. Brokaw describes the method of suture as follows: "After trimming and enlarging the wound with scissors, an oval ring made of eight segments of tubing, with an aperture of two and a half inches, is placed in the bowel. Six apposition threads should be used with this ring, one at each end and two on each side, so arranged that when tied the ring is held bent upon itself. The ring is introduced into the bowel, the end apposition thread passed, then the lateral; the ring is doubled upon itself, and the end thread tied first, next the lateral apposition threads. To prevent eversion of the margins of the wound, particularly at the point of flexure, a single provisional catgut suture is used in drawing the margins of the wound in the bowel together." (*Vide* fig. 13.) Davis tells us that the same result can be accomplished quite as readily with his catgut plates. On the cadaver I have tried a large, solid catgut "drum-snare" ring, and found that it could be just as easily used as the Brokaw ring, after previous softening in water. I only once tried the method on dogs, but gave up the attempt because the spasmodic contraction and narrowing of the intestine in this animal after irritation makes it absolutely impracticable to effect coaptation after partial enterectomy by the use of these aids. In fact, I am somewhat astonished that other observers should affirm that their experimental work with this operation "has been highly successful." I must frankly confess that, in the light of my individual experience, I think little advantage is gained by the ring aids in partial enterectomy of the *small* intestine. The indication for this method of suturing will be found in the wounds of the large bowel (cæcum, colon), where, owing to the greater size of the bowel, the rings can be manipulated with greater advantage. For partial enterectomy of the small in-

testine, the Lembert stitch will, as a rule, be found to be still the simplest and most expeditious method of suture.

PROPOSITION 14.—*Linear Enterorrhaphy.*—In simple linear incisions into the convexity of the bowel (stab wounds, enterotomy), requiring suture, greater security and rapidity can be gained by the *aided* method.

Remarks.—In wounds seriously compromising the mesenteric attachment of the bowel, it is imperative (and the teachings of experience absolutely command this), that resection be practised, but in incised wounds involving the free surface of the bowel the suturing can be quickly effected by the skilled application of the “aid” principle in the manner of a quilled suture; the aids representing the quills being made of decalcified bone (Brokaw) or bars of my solid catgut drum-snare material. If the last material is used, a piece is cut of the length corresponding to that of the wound in the bowel. Threads of fine and well chromicized catgut or aseptic silk are now attached to the solid catgut rod at half an inch or less distance from one another. These threads are now mounted each with a needle as small as can be conveniently used. With two rods thus prepared, the approximation is easily effected. After the rods are introduced into the intestine the needles are made to transfix the bowel by passing from within outward, about one-quarter of an inch from the margins of the wound; the second mounted rod is applied in the same manner, traction is made upon the threads to see that the rods rest well in place, the central threads are now tied, and lastly the distal threads. A few extra Lembert sutures will add to the security of the suture. (*Vide* figs. 14 and 15.) Brokaw, to whose ingenuity we owe the suggestion and technical details of this mode of application of the aid principle, recommends rods made of decalcified bone, or short sections of rubber tubing, the last being the most accessible material and possibly the safest in the upper digestive tract, where the disintegrating forces are most active. This modified “Brokaw” suture is a decided improvement on the suggestion made primitively some years ago by Beranger Feraud (*vide* Stimpson’s *Operative Surgery*, p. 353, 1885 ed.), who used rods or strips made of cork, which were mounted with pins. These cork rods were placed in the intestines, one on each side of the wound, and

parallel to it and the pins forced through from within outward two or three millimeters from the edge. They are then turned so that the points face each other, and the pins of each driven into the other by pressure through the sides of the intestine. The cork rods and pins were to be eliminated with the fæces. The irritant effect of the pins fixed in the cork rods during elimination can well be imagined. The improved quill suture of Brokaw is therefore very noteworthy and should not be forgotten by practical surgeons, who will at once recognize its special advantages.

PROPOSITION 15.—*Ileo-colostomy*.—Intestinal anastomosis by making ileo-colostomy with perforated decalcified bone plates must now be accepted, not only as an established surgical procedure, but as the operation of election in the treatment of the following conditions: (1) Irreducible ileo-colic invagination without perforation or gangrene; (2) cicatricial stenosis in the ileo-cæcal region; (3) carcinoma of the cæcum, with or without excision of the diseased portion of the bowel (Senn).

Remarks.—In no other part of the alimentary tract do the disadvantages of the unaided stitch methods appear greater, and nowhere have the new methods proved more beneficial. Hitherto, in cases of malignant or other disease which frequently obstructs the ileo-cæcal valve, the surgeon has been compelled to resort to the formation of an artificial anus, and only in exceptional instances have attempts been made to restore the freedom of the intestinal circulation at one sitting, and these as a rule have proved disastrous failures. Only those who have experimentally or clinically tried to restore the continuity of the bowel tract after resection of the ileo-cæcal region can fully appreciate the difficulties and the dangers of the technique by the unaided methods, the results of which, in fact, forbid, as a *chirurgia prohibita*, the intervention of the surgeon. The aided methods have completely altered the face of this question, however, and the misery of the artificial anus in such cases will now, under the ægis of Senn's innovation, be probably consigned to the recollections of the past. With the prospects of a greatly reduced mortality the reluctance of the surgeon to undertake these formidable cases will cease and more courageous aggressiveness will mark his conduct in the future.

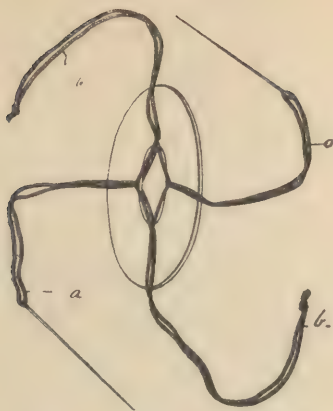


Fig. 1—Senn's Decalcified Bone Plate.

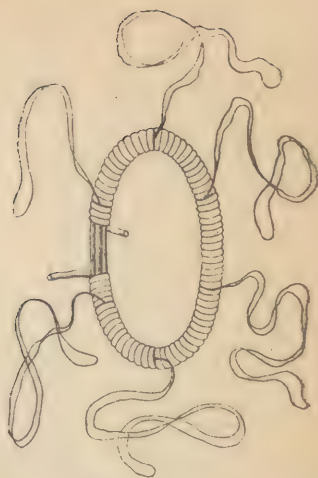


Fig. 2—Abbe's Catgut Ring made of Heavy Catgut Thread.

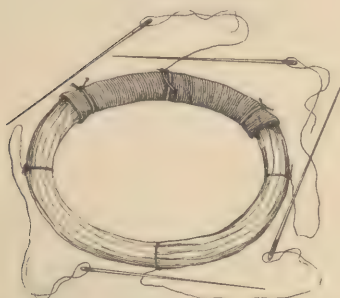


Fig. 3—Author's Solid Catgut Ring made of Boiled Drumsnare.

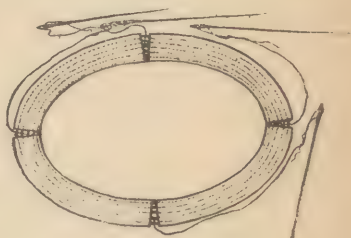


Fig. 4—Brokaw's Ring made of Hollow Rubber Segments (Drainage Tubing) Threaded with Catgut Strands.

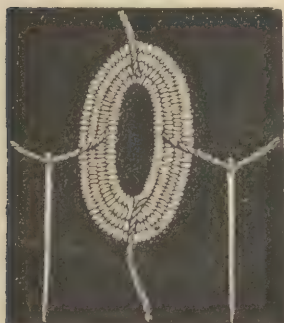


Fig. 5—Davis' Catgut Mats.

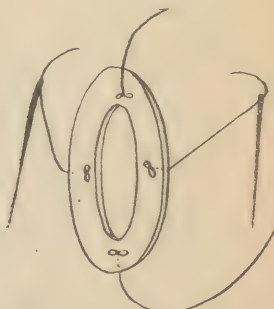


Fig. 6—Davis' Solid Catgut Plates.

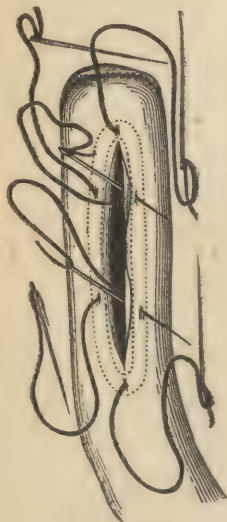


Fig. 7—Fixing Ring in Divided Intestine; the Bowel has been Previously Inverted at Cut End and Formed into a *Cul de Sac*.

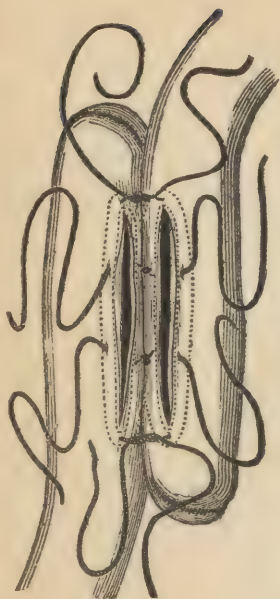


Fig. 8—The Bowels Approximated and the Anastomotic Openings in Confrontation.

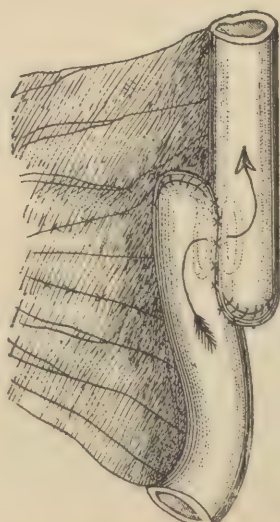


Fig. 9—Diagrammatic Representation of Intestinal Circulation After Completion of Anastomosis and Enterorrhaphy.

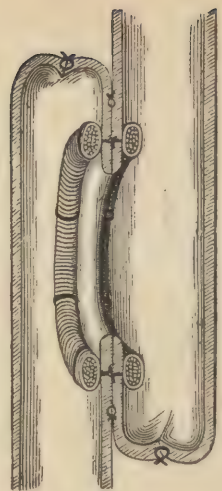


Fig. 10—Vertical Section Representing Anastomotic Connections and Intestinal Interior.

(PLATE 3.)

CIRCULAR RESECTION WITH "AIDED" CIRCULAR ENTERORRHAPHY.

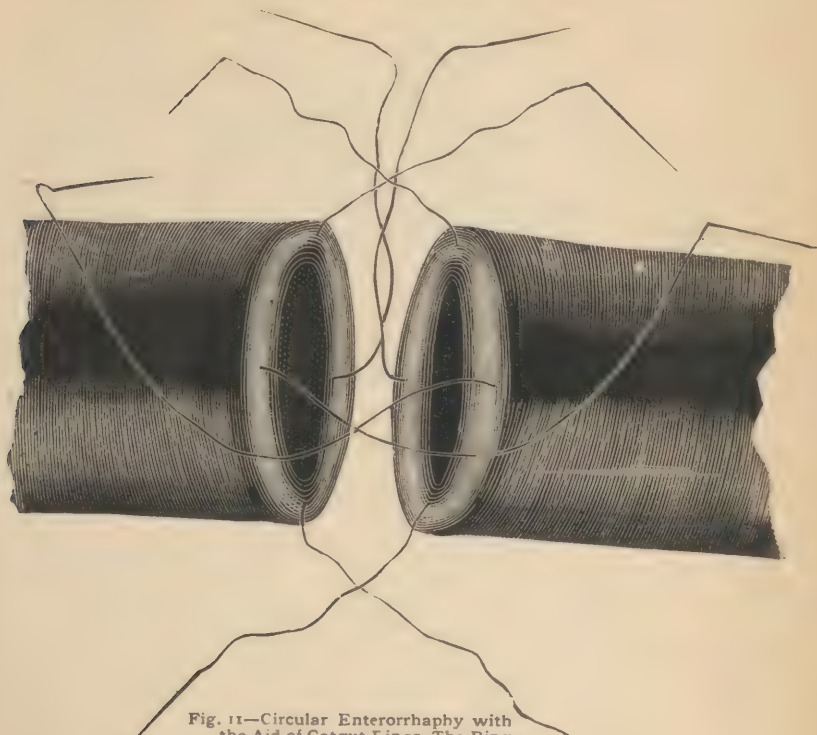


Fig. 11—Circular Enterorrhaphy with the Aid of Catgut Rings. The Ring in Situ and the Intestines in Confrontation (Author's Method).

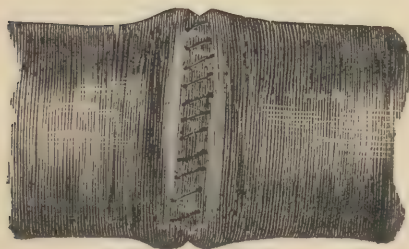


Fig. 12—Complete Approximation with the Continued Lembert Suture after Adjustment of Rings. Circular Resection of Bowel by Direct Lumen to Lumen "Aided" Enterorrhaphy (Author's Method).

ILEO-COLOSTOMY (After Semm).

(PLATE 4.)

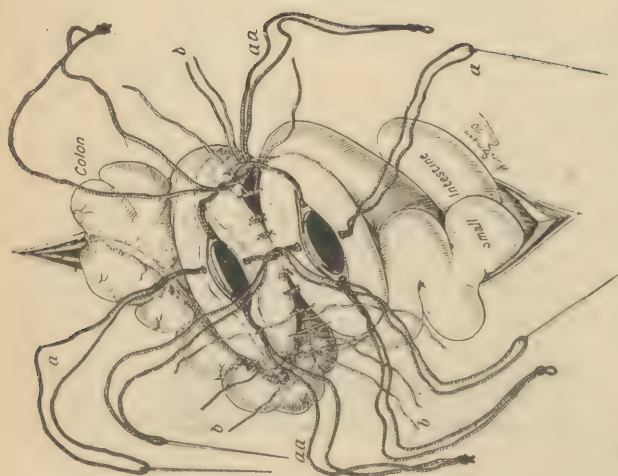


Fig. 16—Ileo-Colostomy without Resection of Cæcum, showing Plates in position, one in the Ileum, the other in the Colon; *a*, lateral or transfixion Sutures passed through the margin of the wound; *a a*, end Ligatures hanging out of Wound; *b*, posterior row of Superficial or Lembert Sutures.

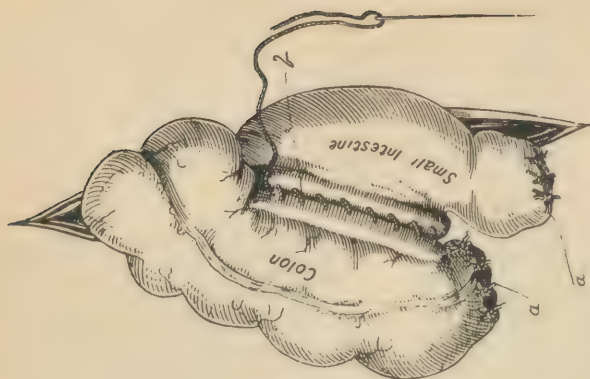


Fig. 17—Ileo-Colostomy as seen after Resection of the Cæcum. *a*, Closed ends of the Colon and Ileum directed downwards; *a a*, Serous surfaces over Anterior Margins of Plates united by a number of Stitches of the continued Suture.

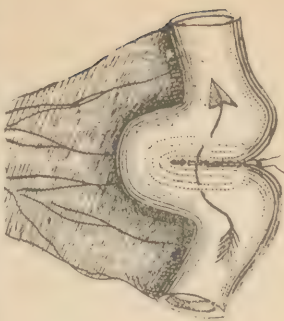


Fig. 13—(After Brokaw). Enterorrhaphy with Aid of Single Ring after Partial Enterectomy.



Fig. 14—Author's Solid Catgut Rod, armed with Transfixion Needles. To be used as an Intra-Intestinal Quill Suture.

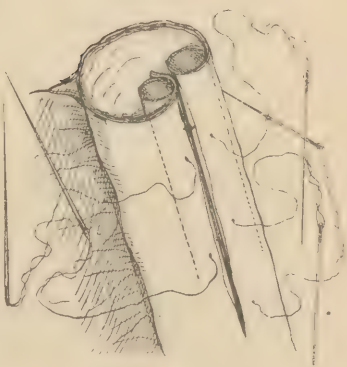


Fig. 15—Vertical Section of Intestine, Showing Catgut Rods in Situ; Transfixion Sutures through the intestinal wall. (Brokaw's Modified Suture for Linear Enterorrhaphy.)

The aided methods which are at present offered the surgeon are (1) lateral implantation and (2) lateral apposition by means of absorbable perforated plates or its substitutes. Lateral implantation may be done by Senn's original method, or by Brokaw's method, but both of these are inferior to the operation of anastomosis by means of the bone plates as illustrated in Figs. 16 and 17. This method is unquestionably the easiest, most rapid, and secure. It is the method adopted by Senn in his two recent and remarkable cases of resection of the cæcum for carcinoma (one recovered completely and the other succumbed six days after the operation from peritonitis, caused by deep ulcers of the excluded portion of the colon). The anastomosis here is, in principle, effected in precisely the same manner as an aided anastomosis in other portions of the intestine, only that when it is coupled with resection, additional and special precautions as to drainage and anchoring the sutured bowel and mode of closing the abdominal incision, which is here lateral and not median, are required. All the technical details have been so thoroughly and recently described by Dr. Senn that I will limit my reference to them by simply pointing to the excellent illustrations furnished by this writer, which gives a clear idea of the operation.

Finally, I would add that the experimental work by Dr. Michnard and myself completely confirms the experience of other operators: first, on the value and necessity of serous scarification to obtain prompt exudative reaction in the part of the peritoneum; second, on the value of omental grafting, though we believe that the valuable influence of the epiploon in securing the suture joint after enterorrhaphy is not as readily procurable in the operations on man as it is on the dog.

CONCLUSION.

In the preceding propositions and accompanying remarks much has been said which is doubtless well known to the investigator and special reader who is *au fait* in all the details and developments of intestinal surgery. But the new art or school of aided enterorrhaphy, which has been founded by the imperishable labors of Senn, has not yet celebrated its fourth anniversary, so that it can scarcely be called old.

The modern rapid "aided" method is quickly superseding the old; in this country and in England no progressive surgeon could admit his ignorance of the methods without blushing. In conservative Europe it is otherwise, though a crisis is impending which will end in a reaction that will be equivalent to a revival in continental methods of intestinal surgery. In the meantime, the work is ever progressing, and the finale has not been reached; new indications, modifications, and details in the technique must be perfected before they finally crystallize; hence the work of the reviewer who surveys the field, confirms or rejects the modification and the methods, is still in order, as his work serves to strengthen and diffuse progress, if only by the ventilation of the most advanced ideas and results. This has been the aim of the author, and he will be amply satisfied if his efforts have aided in accomplishing this last result.

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ABSCCESS OF THE LIVER—TWO CASES, WITH REMARKS.

By J. J. BLAND, M. D., HOUMA, LA.

On July 11, 1889, I was called to see George B., a Creole, aged 23 years, whose occupation at certain seasons of the year was that of gathering moss in the low, marshy region of Terrebonne parish, and, at other seasons, cutting and rafting stave and picket timber in the same malarious district. These occupations necessitated the patient being exposed to all kinds of weather, and often compelled him to stay in the water waist deep all day. He had always lead a temperate life; never drinking intoxicating liquors, and eating plain, simple, yet wholesome food, and being regular in his habits. He had always enjoyed the best of health until February, 1889, when, while at his daily occupation, he was attacked with chills and fever of the tertian type, which yielded to the use of quinine, but persistently returned every few weeks, to be again treated with the same antiperiodic, which for the time gave him relief.

When I saw the patient on the above date, I found him suffering from fever, which he said had been lasting for more than a week, and which, unlike former attacks, had failed to yield to the persistent use of sulphate of quinine. His temperature at this visit was 102°; pulse 115. His complexion was sallow, the conjunctiva somewhat jaundiced; tongue moist and heavily coated with a white, tenacious, wavy fur; he had frontal headache; his bowels were constipated, and his general appearance showed much emaciation. No abnormal sound was heard on auscultating the lungs, and no increase in size of the right side or bulging of right hypochondriac or epigastric regions. Fluctuation was not detected, nor was pain elicited or increased dullness brought out by the free use of the hammer and pleximeter anywhere over the hepatic area.

Knowing the community in which my patient lived to be intensely malarious, having had many patients from that swampy region, after making a thorough examination and grouping the symptoms above enumerated, I hoped I had only a case of malarial fever to deal with, and instituted treatment accordingly; expecting to return in a few days to find him relieved of the malarial cachexia, enriched in red blood corpuscles, and on the fair road to recovery.

July 15. Temperature 100° , pulse 115; tongue still furred with a white coat. No new symptoms having developed, the treatment instituted at my first visit, which consisted of sulphate of quinine, sulphate of strychnia, arsenious acid, and a ferruginous tonic, was ordered to be continued.

July 25. Temperature 102° , pulse 125; tongue still coated and tremulous, bowels in a somewhat relaxed condition and a slight, hacking cough is observed. Patient is nervous and does not rest well at night.

August 1. Temperature 100, pulse 105; complexion improved, face appears bright, appetite fairly good, and he seems better in every way. The hacking cough continuing, cod-liver oil and syrup of hypophosphites compound are ordered in addition to the treatment which had been persevered in from the first.

August 10. Temperature and pulse the same as at my last visit. Patient seems mentally depressed and, notwithstanding the encouraging symptoms of ten days ago, it does not seem that any of the tonics given or stimulating remedies and nutritious foods taken, are assimilated, and he is constantly declining in flesh.

August 15. Temperature this P. M. 103° , pulse 125; bowels inclined to be a little relaxed, moving two or three times a day. Temperature reduced with antipyrine.

August 20. Temperature 101° , pulse 115; bowels regular. Cough continues, with a light characteristic bronchial expectoration.

August 25. No change in patient's condition or symptoms since last report.

September 2. Was called hastily to see my patient, the messenger saying that he was suffering excruciating pain in right side and that the cough was very severe. Owing to a long trip to the country, I was not able to make the visit until twenty-four hours after the summons. On arrival, I found the cough almost constant and the expectoration tinged with blood. Temperature 97° , and pulse thready. Facial expression bore evidence of much pain. Marked increase in size of the hepatic region and bulging of the intercostal spaces were observed. There was increased dullness all over the right hypochondrium,

and, of course, at this advanced stage, fluctuation was obtained. A No. 2 aspirator needle was introduced between the eighth and ninth ribs in the axillary line, and one and a half pints of brickdust-colored pus were drawn off. This gave immediate relief from pain and diminished the cough. The temperature remained low, and the pulse grew weak and dicrotic. I insisted on food and stimulants being taken in order to hold him up, if possible, and to prepare him for an operation which I felt was inevitable.

September 5. Temperature 96°, pulse 110, and thready; cough had again increased, and the bulging intercostal spaces indicated a refilling of the abscess. The aspirator was again used, and two pints of pus were removed.

September 10. Kindly assisted by Drs. Duval, Jastremski, and Bazet, after a careful antiseptic preparation of the parts and a subcutaneous injection of a solution of muriate of cocaine along the track decided upon for the incision, I made a free opening three inches in length between the eighth and ninth ribs in a line with axillary space, giving exit to two pints of pus. The cavity was now thoroughly syringed with carbolized water, a "mammoth" drainage tube introduced and held in position by adhesive strips, and the parts dressed antiseptically. My patient was now extremely weak, and it seemed for a number of days that he would succumb; but he was kept up with stimulating foods and drinks and hot applications about the body and feet. The cavity was thoroughly washed twice a day with carbolized water, which was occasionally omitted and a bichloride solution of the strength of 1 to 2,000 used instead.

September 20. Temperature 95, pulse 65, appetite improving. Abscess still freely discharging and cough constantly diminishing.

September 25. While flooding the cavity with carbolized water three membranes, measuring six inches square, were washed up to the opening and drawn out with forceps. These membranes, which I have preserved, are the peritoneal covering of that portion of the liver which sloughed; hepatic tissue being plainly seen adhering to one side, while the other exhibits the free, smooth, serous coating. Since the membranes have been removed, which had perhaps been detached for some time

acting as an irritant to the granulating surfaces, the pus has been diminishing in quantity and gradually losing its characteristic color. The depth of the cavity, which at first was seven inches, the ragged edges of which could be plainly felt by the patient turning on his right side while my middle and index fingers were introduced into the cavity, is now only three inches deep. The cough, which constantly diminished after the operation, has entirely disappeared. His appetite is good, his color much improved, and he is allowed to sit up in a chair.

October 19. Drainage tube removed and the patient taking outdoor exercise. All indications pointing to a continued improvement, and prospects being fair for a complete recovery, he is dismissed with the promise that he will report at my office every few days.

May 1, 1890. Have just examined the patient, and on exploration find right lung and liver region to be normal. He weighs ten pounds more than at any time previous to his late sickness, feels better and stronger than ever before, and is actively engaged at his daily work.

SECOND CASE.

Mr. J. C. Jackson, aged 63 years, sugar planter for thirty years, called at my office for examination and treatment July 20, 1889.

Previous History.—He had always been healthy up to four months ago, when he began to have a languid feeling every day while at his work, but which did not keep him from attending to his duties. He had not had marked fever at any time. He attributed the dull, languid feeling to the influence of malaria which prevailed in his community at that season of the year, and of which he had hoped to rid his system by the use of the laxative medicines. For the past month his appetite has been poor; and for the same length of time he has felt a heaviness about his stomach, attended by an uneasy feeling, which constantly worried him. He had always led a temperate life, never using alcoholic drinks to excess, and never eating over stimulating foods. Never had a severe attack of diarrhœa.

Present Condition.—Examination revealed a deep-seated,

undefined, indurated condition of the parts in and about the epigastric region, which was sensitive to pressure and which gave pain on percussion. The patient was ordered to bed and an emplastrum cantharidis, 4x6 inches, ordered to be applied over the part and followed for a few days with emollient poultices.

July 31. On reëxamination, the indurated condition above described had disappeared and a deep-seated, well-defined, movable tumor, apparently about the size of a hen's egg, was discovered, a trifle to the right of the median line and about five inches above the navel. A No. 2 aspirator needle was introduced into the tumor and about an ounce of chocolate-colored pus withdrawn, when the needle and part of the tube became plugged with pus-flocculi and broken down hepatic tissue. I now saw that I had a deep-seated abscess of the left lobe of the liver to deal with. Knowing the great importance of completely evacuating the abscess of its contents, I reintroduced the needle several times, but failing to find any more pus, I hoped that this operation would suffice. The patient was confined to his room, a tonic of calisaya bark and iron was prescribed, good nutritious foods were ordered, and I waited for results.

October 1. The abscess seemed larger than before the aspirator was used. Fearing that a slough of broken down liver tissues had been left in the cavity at my first operation, which prevented the free use of the instrument at that sitting, I did not deem it advisable to trust further to the use of the aspirator, either with the hope of evacuating the abscess of its entire contents, or favoring adhesions to the abdominal walls, or receiving that mysterious beneficial effect recent authors claim they get by the frequent introduction of the needle even though they do not remove pus. Hence, without further delay, assisted by Drs. Duval and Jastremski, I made an incision directly over the site of the abscess, of three inches in length, through the integument and muscles down to the deep areolar tissue, packed the wound with carbolized cotton, and waited for adhesions.

October 7. Chloroforming the patient and finding that I had succeeded in getting splendid adhesions, I completed my

operation by making an incision through the remainder of the abdominal tissue and peritoneum into the abscess, with the result of drawing off an hepatic slough and a quart of pus; the former of which could never have passed through the needle of an aspirator or the canula of a trocar. The abscess was now washed out with carbolized water and a suitable drainage tube kept in position.

October 20. The opening is closing so rapidly that sea-tangle tents are introduced to dilate the orifice. Patient has a splendid appetite and is up and allowed to walk about the house.

November 4. Patient still improves. Becoming restless, he is allowed to leave for his country home, when owing to the difficulty in retaining the tube in position, it is left out and the wound, unfortunately, allowed to close.

November 26. I am informed that my patient again complains of a heavy feeling about the stomach which is increased on taking food unless in liquid form, and that he is again compelled to take to the bed.

December 10. I have been summoned to see my patient; the messenger informing me that his lower limbs were very much swollen; that he was vomiting mucus and dark-colored matter, and that he suffered from extreme weakness in his back and lower limbs. Owing to the distance I could not call until December 16—six days after the summons—when I found the pus had re-accumulated, and that he had suffered from chills and febrile exacerbations; was often bathed in perspiration, and that, owing to the recumbent position maintained, the abscess had become adherent to the stomach, and a few days before had opened into that organ. In two days he had vomited half a gallon of pus, the vomiting continuing a number of days, diminished quantity of pus being ejected at each time, until it ceased entirely. The œdema of the lower limbs rapidly disappeared after the pressure of the abscess was removed from the ascending vena cava. He was now able to sit up in bed again and to take and retain his food. The night sweats continued, extreme weakness in back and lower limbs did not improve, and pain did not cease unless under the influence of an anodyne.

Owing to the great loss of hepatic structure, and, consequently, the impaired functions of the organ, the patient, notwithstanding the amount of food taken and retained, did not assimilate it, and he continued to grow weaker and more emaciated until, on February 21, 1890, seven months after I had operated, he died of inanition.

It is claimed by some writers on this subject, and by many practical surgeons and excellent diagnosticians, that, however deep seated the abscess may be, the diagnosis may be reached by the presence of some of the many diagnostic symptoms. Most of these writers lay stress on the pain elicited by percussion properly performed over the site of the abscess. Others are candid enough to admit that when the abscess occupies the convex surface of the liver, or when it points positively, in which situations it may be impossible to elicit pain or fluctuation, the diagnosis can only be made (if at all) with the aid of the aspirator. After my experience in the diagnosis and treatment of a number of cases of abscess of the liver, I can heartily indorse the expression of the distinguished Dr. Pepper, in his excellent "Practical System of Medicine," when he says that "he who finds the diagnosis of abscess of the liver easy, under all circumstances, can have had but little experience with numerous difficulties in the way of a correct opinion. There are cases so plain that the most casual inspection suffices to form a conclusion; there are cases so difficult that the most elaborate study fails to unravel the mystery." In case 1, while the systemic symptoms grouped in the outset pointed to malarial fever of a remittent type, I am satisfied now that an abscess existed when I first saw the patient, but it was so deep seated and perhaps of such small size, that I could not get fluctuation, nor did the free and repeated use of the percusser and pleximeter elicit any pain or show up abnormal dullness over the hepatic area. Hence, the *local* symptoms certainly did not warrant me in thrusting the aspirator needle into the deeper portions of the liver. If, on percussion, I had elicited pain, however slight, or had detected abnormal dullness at any one point, I would have felt warranted in using the aspirator as an aid to my diagnosis. It was a month after I first saw the patient, and six months after he was first taken sick,

before the abscess reached the convex surface of the liver; else the diaphragm would have been pressed up, the thoracic cavity, or lung space, encroached upon, and cough and pleuritic pain induced. When these symptoms did manifest themselves, other and unmistakable symptoms appeared at the same time, and the aspirator was needed only to relieve the abscess of its contents.

The great loss of hepatic structure in this case as shown by the depth of the cavity, the vast destruction of peritoneal covering, and the extremely low temperature, are all interesting features, going to show to what extent a liver may become injured, and yet regain its full functional activity; for his present good health, his increased weight, his ruddy complexion and his good digestion, all indicate that he is more vigorous now than ever before.

The temperature in case 2, like that in case 1, ranged from one to three degrees below normal during the stage of suppuration, and it was only during the febrile exacerbations, just before the abscess opened into the stomach, that the temperature was above normal.

On the theory that the liver is the greatest calorifying agent in the body, owing to the chemico-physiological processes which occur in its cells, I account for the extremely low temperature in these cases. In extensive suppuration of this organ, its heat-producing power, like its other functions, would naturally become impaired, and this impaired condition would manifest itself in a lowered temperature of the body.

The flattering appearance of this patient when he left for his country home, when the drainage tube was left out, and the subsequent unfortunate termination, serve to emphasize the great importance of keeping such patients under close observation, and the absolute necessity of maintaining perfect drainage until the cavity is entirely healed. Had this been done, I feel convinced that the termination of this case would have been far more gratifying than it was.

CORRESPONDENCE.

VIENNA LETTER.

ISCHIAS SCOLIOTICA.

At a recent meeting of the Society of German Physicians, of Prague (Bohemia), Prof. Gussenbauer read a paper on ischias scoliotica. In 1878, when professor at Liege, in Belgium, he had published two cases of this rare and hitherto undescribed disease, which he had the opportunity of observing at the surgical clinic of Liege. In one of these cases he had to deal with a journeyman in coal mines, whose business compelled him to work continually with the upper part of his body bent forward. He became affected with severe pains in the left lower extremity, which became complicated with a particular deformation of the vertebral column.

The second case was that of a smith in weapons, who, also, as the result of hard work, became first affected with pains in the right leg, and, later on, presented quite the same deformity of the vertebral column as the first patient. Prof. Gussenbauer, at that time, called this affection "*scoliosis neuropathica*," or "*scoliosis neuromuscularis*," or "*ischias paradoxa*." Besides these cases, which were the first on record in medical literature, Albert, Nicoladoni, Babiusky, and Schüdel, had published other analogous cases in 1886. In Prague, Prof. Gussenbauer had observed nine such cases, out of which five had been treated in his clinic, and four in his private practice.

The affection under consideration could, in short, be described as follows: Almost in all these cases we had to deal with persons who, from various causes, were suffering from sciatic pains in one or two legs for a short or long period. These cases resisted the common treatment, increased in severity, spread over the gluteal, sacral, and lumbar regions, and after a long duration the characteristic deformation of the vertebral column came on. This first became manifest by the peculiar way of walking. All cases had the common characteristic symptom, viz., that the lateral deviation of the trunk was situated over that part which was opposed to that affected by ischias, and in this stage it might have been thought that total scoliosis were present. After a certain time compensatory deformities came on, which simply resulted from statical principles, and a particular rotation supervened, either in the lumbar region or in the dorsal or the cervical parts of the spine. In some cases the scoliosis became combined with a hyphotoc deformity. The patients had the least pains

when the body was bent forward, and for this reason most of them were inclined to walk with their body bent forward. When a "redressement" of the vertebral column was tried, the pains became very intense. In the case of suspension, the scoliosis disappeared, which was a diagnostic symptom of great importance.

The five individuals treated in Prof. Gussenbauer's clinic were young individuals who became first affected with sciatic pains, owing to chills or severe work, and presented the typical scoliotic deformity of the vertebral column.

As to the seat and the nature of the disease, it was explained in various ways. In his first two cases, observed at Liège, Prof. Gussenbauer believed that the cause was extension of the "musculus erector trunci," and nerve-stretching. Prof. Albert believed that the contractions of the muscles were the results of the sciatic pains. Prof. Nicoladoni pleaded in favor of severe anatomical changes, viz., inflammation of the neurilemma, which continued as far as the "cauda equina." Dr. Schüdel was of opinion that neuritis and myositis were the chief characters of the affection.

Owing to the recent observations which Prof. Gussenbauer had made on the genesis of the affection under consideration, he looked upon it as being due to a stretching of the nerves and the muscles.

As to therapy, Prof. Gussenbauer remarked that it was natural that all the remedies used against ischias were useless. Kocher stated that he had obtained good results from hemorrhagic and non-hemorrhagic nerve-stretching. Prof. Gussenbauer had seen excellent results from massage of the muscles of the back and the thighs, as well as from typical exertions of the diseased muscles, electricity, and moist wrapping.

Prof. Schauta stated that he believed he had observed an analogous disease in the case of a woman who had become confined in September of last year. Even before delivery, pains were present in both the lower extremities. After delivery the pains persisted, and were particularly located in the calf of the leg, and after a month they remained entirely limited to the hip joint. A month after delivery, she became crooked, and on examination, the vertebral column was found to be changed in the manner described by Prof. Gussenbauer. The movements in the hip joint were perfectly free, and the pelvis was normal. Prof. Schauta believed that, in this case, the abnormal attitude had been produced by pressure during pregnancy on that part of the sciatic nerve which ran in the pelvis.

ACUTE INTESTINAL OBSTRUCTION.

Docent Dr. v. Eiselsberg showed two cases of acute intestinal obstruction before a recent meeting of the Imperial Royal Society of

Physicians of Vienna. The cases were in the clinic of Prof. Billroth, and in both the cases they had to deal with reducible inguinal herniæ, which became incarcerated owing to the raising of a heavy burden; the herniæ were reduced. In spite of the reposition symptoms of internal incarceration came on, which made a laparotomy necessary. In one of these cases the incarcerated and strangulated intestine was found in a cord, which extended from the left internal abdominal ring toward the region of the navel. This, however, became torn when it had to be removed, so that a piece of a length of eight centimetres had to be resected. Twenty-four days after the operation, the patient was dismissed as cured. In the second case, the intestine, which was drawn behind a similar cord, presented two strangulation-furrows which were not, however, intense, so that the intestine could be reposed, when copious stools and rapid recovery came on.

TWO CASES OF EXTIRPATION OF THE SHOULDER ZONE.

Dr. Von Eiselsberg furthermore showed two patients from whom he had removed, in Prof. Billroth's clinic, the half of the shoulder zone. In one of these cases the enucleation of the arm had to be made, owing to severe lesions of the upper arms and the shoulder zone; the scapula had to be removed entirely, and this was true of the largest part of the clavicle.

In the case of the second patient, the enucleation of the shoulder had to be performed, owing to chondro-sarcoma two years ago. A year later, relapse occurred in the form of a nodule, which developed to such a tumor that the whole of the scapula and more than half of the clavicle had to be extirpated.

Both the patients were quite well.

ECHINOCOCCUS ORBITALIS.

At a recent meeting of the Imperial Royal Society of Physicians, of Budapesth, Dr. L. Issekutz brought forward an interesting case of echinococcus orbitalis.

Since Jean Petit, in 1744, had made the first communication on orbital echinococcus, forty-five such cases have been reported. In the case of the patient under consideration, a girl, aged eight years, a tumor with protrusion of the lower eyelid developed over the left eye. The eyeball presented impaired mobility. No fluctuation, and exenteration was performed on the supposition that they had to do with a solid tumor. When the swelling was sectioned a fluid, which contained much blood, escaped from the orbita. As the eyeball had already been sectioned and there was atrophy of the optical nerve, enucleation had to be performed. In the wall of the cyst vesicles of echinococcus were found.

TREPANATION OF THE CRANIAL CAVITY IN SUPPURATIONS OF THE
CRANIAL CAVITY TAKING THEIR ORIGIN FROM SUPPURATIONS OF
THE MIDDLE EAR.

At a meeting of the Imperial Royal Society of Physicians, of Vienna, Prof. Salzer, Jr., read an important paper on this subject, and showed a patient, aged eleven years, who had been successfully operated by him. The girl suffered for many years from otorrhœa, and in February of this year the "évidement" was practised, but severe symptoms, such as vomiting, fever, weariness, and spasms of the right part of the body, came on; a fetid discharge from the left ear was constantly observed. Taking into account these threatening symptoms, trepanation of the mastoid process was performed at Prof. Billroth's clinic. A necrotic piece of the dura mater was found immediately after opening; this was removed. An exploratory puncture of the part of the cerebrum lying under the necrotic dura mater did not reveal the presence of pus. A very fetid pus, however, escaped from the "sinus sigmoideus" immediately after opening. After a large part of the sinus had been extirpated and the wound had been openly treated, the course of the wound was not attended with any reaction. Some days after operation, the patient had the sensation as if she would fall from the bed at the left side, and a staggering gait to the left side was also present, which symptoms might, perhaps, be due from a lesion of the semi-circular canals.

Prof. Salzer stated that, taking into account the favorable result of the case under consideration, he might fairly establish the principle that in the case of cerebral symptoms following otorrhœa, trepanation and exploration, by means of Pravaz's syringe, were indicated. A second case ended fatally after operation, as a very advanced pyæmia was already present.

Prof. Politzer made some remarks on the case operated by Prof. Salzer, by emphasizing the fact that the case presented the symptoms of a cerebral abscess. The disappearance of the symptoms, however, showed that there could not have been an abscess, but that the symptoms were due to a serous moistening of the dura mater. The present case showed that when operation was done at an early date it could be performed with very favorable results, even when the sinus contained pus. The non-occurrence of pyæmia could be explained by the fact that the pus became sharply limited by thrombi.

THE DIURETIC EFFECT OF THEOBROMIN.

Dr. Graux has tried theobromin, as well as theobromin-salicylate of sodium, in several cases of cardiac failures which were asso-

ciated with considerable disturbances of compensation; also in chronic nephritis; and he has found that the diuresis increased more and more, and that the quantity of the albumen and the urea also became augmented. The theobromin had a prompt effect where the infusion of digitalis and other diuretics had nearly no effect at all. The patients invariably felt much better; pulse and respiration were not influenced. The pure theobromin was absorbed with difficulty, and also exerted its influence at a proportionately late date, whereas the effect of the salicyl-compounds became manifested on the day of administration, but it did not last so long as that of the pure drug. The usual daily dose of theobromin-salicylate of sodium amounted to about six grammes, the single doses being one gramme each.

SOME REMARKS ON SEVERE AFFECTIONS OF THE LUNGS AND THE PLEURA IN THE CASE OF INFLUENZA.

Prof. Kahler, of Vienna, established three types of the severe affections following influenza; among these there were also combinations. The first of these types was the acute formation of abscesses in the lungs and the concomitant or independent purulent pleurisy. Clinically, all the symptoms of pneumonia except the characteristic pneumonic sputum were present. Two such cases ended fatally. In other cases purulent pleurisy occurred after a short duration of the symptoms of influenza, and was the prominent symptom, owing to which even thoracentesis had to be resorted to. They were justified in regarding these cases as being due to influenza on account of the fact that primary pulmonary abscess and primary purulent pleurisy were so rare. As to the supposition of a secondary infection, this was contradicted by the proportionately rapid course of some cases, so that the purulent processes which had occurred in the bronchi and parenchyma of the lungs had to be considered as a direct effect of the agents of the influenza. The second type was that of a slow lobular pneumonia or pleuro-pneumonia. When the influenza had disappeared or had undergone retrograde metamorphosis, percussion-dullness and other symptoms pointing to an infiltration of the lungs remained behind, the high temperature continued, and in spite of the subsidence of the primary pneumonia, a severe affection of the lungs would persist for weeks, which finally ended with a lytical attack of fever. The third type was that of a severe bronchitic disease, which would terminate fatally or be followed by catarrhal or lobular pneumonia, also ending in death. These cases might be confounded with miliary tuberculosis. The more or less severe disease of the bronchial mucous membrane formed the common link between the

single types of these pulmonary affections. It was from the intensity or the property of the same, and not from individual conditions, that the secondary participation of the lungs and the pleura depended. Patients affected with cardiac failure and diabetes were most exposed to the dangers associated with such complications.

THE TREATMENT OF NERVOUS IMPOTENTIA COEUNDI.

Prof. M. Rosenthal, of Vienna, states that setting aside the neurasthenia following gonorrhœa, he attributes to onania and to early sexual excesses the greatest influence on the sexual faculties. Furthermore, it was the various forms of spinal and cerebral neurasthenia, as well as the initial forms of certain anatomical changes in the brain and the spinal cord, which produced impotentia coeundi. The prognosis was in the case of neurasthenia following gonorrhœa the most favorable one. The "constituents" of the sexual faculty could be changed in a different manner. The sexual desire ("libido sexualis") could occasionally be increased, whereas the erection of the sexual organ and the voluptuous sensation were impaired during "coition." In other cases the "libido sexualis" was scarcely changed by external influences. In lesions of the spinal cord the "potentia" could occasionally be quite extinct, and on other occasions erection of the sexual organ without the faculty of ejaculation was present. Prof. Rosenthal also reckoned among these cases the "nervous spermatorrhœa," with hyperæmia of the mucous membrane of the prostatic part, which was due to a reflex influence produced by the augmented irritability of the prostatic portion.

As to therapy, Prof. Rosenthal recommended the local use of remedies diminishing irritation. Instillations of cocaine with Ultzmann's sound, and the subsequent introduction of metal sounds, or the "psychophor," injections of from $\frac{1}{2}$ to 2 per cent solutions of zinc after micturition were useful. Prof. Rosenthal, moreover, recommends cold baths, moist wrappings, "douches" on the back, and the "perineum," and internally the extract of ergot (from $\frac{1}{2}$ to 1 gramme); in the case of anæmia, also "ferrum peptomatum."

Vienna, July 5, 1890.

LONDON LETTER.

DIPHTHERIA AND MILK—DIPHTHERIA IN THE CAT—BACTERIOLOGY OF DIPHTHERIA—DIPHTHERIA IN THE COW—COLD AS AN ETIOLOGICAL FACTOR—THE ANTHRAX-ALKALOID—THE POST-GRADUATE COURSE IN LONDON—HYPNOTISM AS A THERAPEUTIC AGENT—THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Your readers are already familiar with some of the observations made by the Medical Department of the Local Government Board

with regard to the etiology of diphtheria; Mr. W. H. Power, by a careful analytical examination of the history of certain limited epidemics of diphtheria, proved as clearly as anything can be proved by circumstantial evidence, that the infection of the disease was sometimes conveyed by milk. Some of the evidence collected at a recent outbreak (1887, near Farnham) was very remarkable, inasmuch as it tended to prove that of two series of families, the one using much and the other little milk, the former suffered between five and six times as much; moreover, there was evidence also that in the families attacked, those members who consumed much milk were more liable to suffer than those who consumed little, 78 per cent of the former and only 27 per cent of the latter suffering. Mr. Power thought that in houses where it was the practice to store milk over night, there was a distinct excess in the incidents of diphtheria.

How the milk in this and other similar epidemics became infective had not been ascertained, although the discovery that the cow was liable to suffer from scarlet fever, and to communicate that disease to its milk, naturally raised a suspicion that something of the same kind was occurring in these outbreaks of diphtheria.

Dr. Klein was instructed to undertake a bacteriological inquiry. He ascertained that, as had been suspected, cats were liable to contract the disease from mankind, and to give it to children who fondle them during their illness. The disease occurring thus spontaneously in the cat is an acute lung trouble; the animals were quiet, did not feed, and seemed unable to swallow. In some cases they recovered; in others they became emaciated, while the lung trouble increased, and they ultimately died. In one instance the cat malady, occurring where children were soon after attacked by diphtheria, was of a widespread nature; and *post-mortem* examination of the affected cats showed severe lung disease, broncho-pneumonia, and large white kidneys, due to fatty degeneration of the entire cortex. Like previous observers, he found in diphtheritic membrane two species of bacilli, which very much resembled each other. One of these was capable of producing diphtheria in the cat. This bacillus was first described by Klebs in 1883, and first grown in artificial cultures by Löffler, and commonly known as the Klebs-Löffler bacillus. Neither in the cat nor in man has this bacillus been found in the blood, and the visceral lesions are with probability attributed to the toxic effects of soluble poison elaborated by the bacilli. Such a soluble poison has, it is well known, been separated by MM. Roux and Yersin from artificial broth-cultures.

Having got thus far the experimenter was in a position to test the action of this bacillus on the bovine species. Accordingly two

perfectly healthy milch cows, which had been kept under observation for ten days prior to the experiment, were inoculated with a broth culture of the bacillus derived from human diphtheria. This was followed by slight local reaction and febrile disturbance, which, however, had subsided by the third day, and the animals appeared to be in good health until the eighth and tenth days, when they were attacked by a slight cough, which gradually increased. Both became emaciated; one died on the fifteenth day, the other was killed (being very ill) on the twenty-fifth day. During the illness both animals had an eruption on the teats and skin of the udder, which appeared in successive crops. From one of the cows on the fifth day milk was drawn from a healthy teat, the outside of the teat and the milker's hands having first been thoroughly disinfected. From this milk cultivations were made, and it was found that thirty-two colonies of the diphtheria bacillus, without any contamination, were obtained from one cubic centimeter. The presence of the bacillus in the eruption on the udder was also demonstrated, both by microscopic examination and by inoculation. The presence of the bacillus in the milk, though it is not present in the blood in the human and feline disease, is a curious and extremely interesting observation. They were found in the milk on and after the fifth day, though it will be noticed in small numbers only. That the milk was infective was proved by an outbreak of diphtheria among a number of cats, who were, contrary to orders, fed upon the milk of these two infected cows.

Great importance used to be attributed to cold as a factor in the production of various diseases, but of recent years there has been a disposition to question the validity of this assumed causation. Definite evidence that cold plays any important part can hardly be said to exist. It will be interesting, therefore, to call attention to a paper read by Surgeon R. Ross, at a recent meeting of the South Indian Branch of the British Medical Association. It is published in the *Transactions* of that Branch, which, however, only circulates among members. Dr. Ross accompanied the Second Madras Infantry to Burmah. During the first few days after their arrival the men who were working with the baggage, or cooking, ashore at the mooring stations on the river, were often suddenly drenched to the skin; and many of those who were not wet by the rain, were more than damp from their own perspiration when transferring the baggage. Heavy showers preceded by strong gusts of wind came up at short intervals, but in the lulls between them the air was hot and still, and so damp that the sweat remained on the body and clothes, until at the advent of the wind it was dried up with a rapid and chill evaporation.

A few days after reaching Burmah, fever of a remittent type

broke out. No doubt many causes contributed to this outbreak, but Dr. Ross's statistical inquiry appears to show pretty clearly that exposure to sudden chill, under the circumstances above mentioned, was an important factor. He carefully examined into the history of ninety men of the rank and file, and after excluding cases in which there had been recent attacks of malaria before leaving India, he had eighty-one cases, distributed as follows:

	<i>Men who got wet.</i>	<i>Men who remained dry.</i>	<i>Totals.</i>
Total number	70	11	81
Healthy	51	10	61
Sick	19	1	20
Percentage of sickness	27.1	9.1	

Dr. Sidney Martin communicated to the last meeting of the Royal Society a paper on the "Chemical Products of the Growth of *Bacillus Anthracis* and their Physiological Action." He grew the bacillus in pure alkali-albumin, made from the serum. He found that the bacillus produced an alkaloid, which was poisonous, and also two poisonous albumoses. The alkaloid was a well-marked base, forming crystalline salts; a dose of .1 or .15 killed a mouse, weighing twenty-two grammes, death occurring in two or three hours. The symptoms were drowsiness, ending in coma; there was extreme subcutaneous œdema at the point where the alkaloid was injected, and as a rule enlargement of the spleen. The albumoses had a similar effect, but their action was less rapid. The lethal dose was "twice or three times that of the alkaloid, and the animal survived for twenty-four hours. His conclusions are that the anthrax bacillus in digesting the alkali-albumin, forms: (1) proto-albumose, (2) deutero-albumose, (3) an alkaloid. The alkalinity of the albumoses may explain their toxic properties, being due to the fact that the alkaloid is in a "nascent" condition in the albumose molecule. The bacillus forms the alkaloid from the albumose, and it is possible that the living tissues have a similar action when the albumose is introduced into a living animal.

The post-graduate course given during the winter session is now in course of repetition. For the first time poor law infirmaries in London have been utilized for clinical instruction. These infirmaries are in fact well appointed hospitals supported by the parish rates. The majority of the cases to be seen there are chronic, but a very considerable proportion are extremely interesting. Many cases of chronic nervous diseases, for instance, find their way there. The attendance at these classes is larger than at the previous course, but is still not so numerous as might have been expected.

A considerable sensation has been caused by a demonstration of hypnotism given to the medical profession in Leeds by Dr. Bramwell, of Goole. The patients had been prepared by previous seances, and certain minor operations were performed upon them while in the anæsthetic condition. Dr. Bramwell is a physician of good standing, and a son of a well-known physician of Perth who died a few years ago. As was to be expected, the occasion was seized upon by the lay press, and it is said that many inducements are being held out to Dr. Bramwell to establish himself in London.

The work of nearly all the London societies is now suspended until next October. The Royal Medical and Chirurgical Society has just settled itself into its fine new house in Hanover square; the immigration has caused the uprooting of many old associations, but more space was required for its library, which is one of the finest medical libraries in existence, rivaling for practical purposes that in Washington.

London, June 3, 1890.

A PROTEST AGAINST IGNORANT CRITICISM.

Editors of the New Orleans Medical and Surgical Journal:
GENTLEMEN—I beg leave to call your attention to the following clipping from the Meridian (Miss.) *Daily News* of July 4, 1890:

The increase in the number of young people wearing glasses is a fact which learned men are trying to explain. It is easy enough. The schools are each year turning out a vast number of oculists, and the quack oculist finds it his duty, and to his profit, to prescribe glasses for every known eye trouble. The meritorious oculist makes it his business to cure without the intervention of crystals.

I take the liberty of thus trespassing upon your space for two reasons: First, because the above excerpt is a fine example of the reckless audacity with which many persons hasten to express the most positive opinions upon subjects about which they are profoundly ignorant; a tendency to be checked whenever possible; and second, because I fear that it pronounces a belief unfortunately all too common. The statements, I need hardly say to *you*, in the quotation are the exact reverse of true. Within the past quarter of a century, the progress of ophthalmology has taught us with increasing emphasis and certainty that the vast majority of eye complaints from which the better class of our patients suffer are due to some refractive or muscular defect of the eye, rendered intolerable by the ever increasing burden laid upon the organ by the rapid advance of civilization. These chronic conjunctivites, recurrent styes, racking neuralgias, etc., now so common, cannot be cured though the patient

be smeared and sluiced with salves and eye washes, or made a perambulating apothecary shop of tonics and alteratives. The general rule holds good; we must recognize the *cause* of the malady and remove it by a suitable glass. The moment the eye-strain is relieved the case gets well of itself. There is, perhaps, no more exquisite example of the application of an abstruse and refined science to the swift and sure relief of human suffering. I say swift and sure, for these cases relieved promptly and at the expense of a moderate fee, at the hands of a competent practitioner, drag on for months, and wearied out at length abandon hope and a goodly sum of lucre, if they fall into the clutches of the ignorant or dishonest. Here, as is so often the case in our art, the trustworthy and competent physician actually antagonizes his pecuniary interests. Twenty-five or fifty dollars for a prescription for glasses, based upon four or five visits and examinations, may seem to a patient an enormous fee, but it is because he does not realize that the certain celerity of the highly trained and experienced artist has saved the expenditure of four times that sum for four or eight times the number of visits attended by great discomfort if not absolute agony, and resulting in nothing save exaggeration of the disease or lasting injury, and the gloom of despair.

I am, gentlemen, always yours most respectfully,

HENRY DICKSON BRUNS, M. D.,

*Visiting Oculist and Pathologist to the Charity Hospital.
New Orleans, July 21, 1890.*

EDITORIAL ARTICLES.

THAT MEDICAL LEGISLATION.

In April last, Dr. C. D. Owens, president of the Louisiana State Medical Society, after correspondence with a number of prominent members from various sections of the state, thought it best, on account of the high waters and crevasses, to postpone indefinitely the annual meeting of the society, which was to have taken place in May. As Baton Rouge had been chosen for the meeting place this year, in order to influence legislation in favor of the medical profession, Dr. Owens called upon a number of medical gentlemen, all prominent and active members of the society, to meet him informally at

the St. Charles Hotel, in order to discuss the advisability of drawing up some plan to remedy this unforeseen accident.

It was unanimously agreed at that meeting that Dr. Owens's course in postponing the annual meeting was proper, and the president was advised to appoint a committee to see that some proper legislation be brought before the general assembly at its approaching session. Dr. Owens decided to leave the matter in the hands of the standing committee on State Medicine of the Louisiana State Medical Society, to which he added an auxiliary committee composed of Drs. Matas, Newton, Bruns, and Archinard, in order to lighten the State Medicine Committee's labor; and, as the chairman of this committee, Dr. Dupree, of Baton Rouge, was unable to attend to his functions on account of sickness, he appointed Dr. Miles to act in his stead, and Dr. Bemiss in place of Dr. Davidson, deceased.

It was further agreed that this enlarged committee be called together as early as practicable, and that it be empowered to draft a medical bill; which bill, after being submitted to the officers of the State Society, to the Orleans Parish, Attakapas, and Caddo Medical Societies, was to be sent to the legislature with their several indorsements, and its passage actively worked for.

Dr. Miles immediately called his committee together, and it went to work and prepared, with the help of Mr. W. B. Parkerson, attorney at law, from a number of statutes as used in other states, the just and liberal law published in our June issue.

Mr. Parkerson, accompanied by a delegate sent especially for that purpose by the Orleans Parish Society, went to the capital, and they easily succeeded in having the bill introduced and passed in the house by a large majority and reported unanimously favorably by the judiciary committee of the senate. When the bill came up for final action in the upper house, to the surprise of all it was defeated by a vote of eleven to nineteen.

We are reliably informed that this defeat is to be attributed principally to two causes: firstly, to a private letter written to one of our senators by a member of the State Society from New Orleans, a man who has at all times opposed in an underhand

way every public measure to which his consent was not asked, or which did not serve directly his personal interest, and who, unfortunately, enjoys a certain amount of popularity and influence among people who only know him imperfectly, and are therefore unacquainted with his hypocritical methods; and secondly, to a petition read in the senate by Senator Davis and signed by only ten medical men of New Orleans, all of the homœopathic sect. This document we publish in full below, with the names of its signers, and follow this with the names of the members of the committee on State Medicine of the State Medical Society, together with the auxiliary committee, in order to have our readers contrast both lists and see on which side the conceit lies.

The petitioners opposed the bill not on account of any menace of injustice to themselves, or to their sect or any other sect, or to the people, but used reasons in their opposition which are mere generalities, and which no thinking man, after reading the proposed act, would for a minute entertain.

The reason, that it gave unlimited power to six men chosen by a layman—the governor—is met by the fact that at present the power is in the great majority of cases vested in seven men chosen by themselves and perpetuating themselves, and who, depending for their earnings on the number of their classes, are interested in rejecting as few applicants as possible, so as not to diminish their popularity, hence their emoluments. The board as proposed had little or no direct interest in refusing or admitting any one to the practice of medicine, and were more likely to act in a spirit of justice and fairness to every one.

The long term of office, twelve years, each governor only appointing one-third of the board, and the small emoluments of the members of said board, were a sufficient guarantee against political preference and influence.

The fact that the act required each candidate to present a diploma from a recognized college, proved it not to be inimical, but rather friendly, to the vested rights of our university. This is still further borne out by the fact that the chairman of the committee, is one of the professors of the medical department of the university.

Petition against the proposed medicinal bill, House Bill No. 172 of 1890:

To the Honorable Members of the Legislature of the State of Louisiana: GENTLEMEN—The undersigned physicians of the city of New Orleans do hereby solemnly protest against the adoption of House Bill No. 172, entitled an act to regulate the practice of medicine; to create a Board of Medical Examiners, etc., etc., for the following reasons, to wit:

1. Because it grants to six men the absolute right to determine who are qualified, and who are not qualified to practice medicine in the State of Louisiana.

2. Because this would be inimical to the vested rights of our State University, as well as of all other Medical Colleges throughout the United States and Europe.

3. Because the knowledge of human frailty justifies us in believing that such power in the hands of any six physicians would certainly be abused for political or personal ends.

4. Because it places the medical profession of Louisiana hereafter at the mercy of six men appointed by the governor, a layman, not supposed to be able to judge of the qualifications of the examiners.

5. Because all such appointments are prompted by political preferences, thus making the medical profession subservient to a political machine.

6. Because, while we believe that a law protecting the ignorant classes from the malpractice of quacks and charlatans of all kinds would be just and useful, we consider this bill a most infamous outrage upon the medical profession of Louisiana.

7. Because it is against the constitution of the United States, and if passed would lead to a great deal of vexatious litigation.

We therefore appeal to your sense of justice to kill and bury without hope of resurrection this effort of a few conceited physicians of the city of New Orleans to dictate to their equals, and even their seniors.

And we humbly pray, etc.

[Signed]

S. M. ANGELL, M. D.

ROBERT A. BAYLEY, M. D.

J. G. BELDEN, M. D.

J. W. BELDEN, M. D.

E. M. DUPAQUIER, M. D.,

Per J. E.

C. R. MAYER, M. D.

JULES A. MATHIEU, M. D.,

Per J. E.

D. M. LINES, M. D.

C. J. LOPEZ, M. D.

J. G. SMITH, M. D.

Per J. E.

Standing Committee on State Medicine of the Louisiana State Medical Society: Dr. J. W. Dupree, Chairman; Dr. A. B. Miles, acting Chairman, Professor of Tulane University, House Surgeon Charity Hospital; Dr. R. H. Day, Dr. J. H. Bemiss, Dr. D. R. Fox, Dr. J. C. Egan, Dr. E. M. Hooper, Dr. S. T. Meeker, Dr. F. J. Buffington, Dr. B. T. Mosley. Dr. S. Logan.

Auxiliary Committee: Dr. I. J. Newton, Jr.; Dr. Rudolph Matas; Dr. H. D. Bruns; Dr. P. E. Archinard.

We regret very much that the senate of our general assembly, men who are credited with doing things with mature and deliberate judgment, should have chosen to follow the suggestions of the few signers of this base petition rather than the wishes of the vast majority of the medical profession of every sect in the state.



A CASE OF ARSENICAL POISONING.

On the evening of the 25th of May last, a party consisting of three persons, a widowed mother with her young daughter, and a young man, partook of some red sherbet, purporting to be strawberry sherbet, and which had been purchased from a street vendor. Shortly afterward they were all three seized with violent griping pains and nausea. The young man and the mother vomited early and freely; the young lady did not vomit until the next morning, at which time her condition seemed alarming enough to summon a physician. The doctor suspecting poisoning prescribed milk, white of egg, and dialysed iron. The young lady, however, died on the morning of the 27th of May.

The coroner was called in, considered the case suspicious enough to make a post-mortem examination, and from the lesion found intense gastro-intestinal inflammation, with fatty infiltration of the liver and kidneys. He concluded that it was a case of corrosive poisoning, and removed the stomach, a piece of the liver, one of the kidneys, and a piece of the intestines, and took them along with the contents of the stomach to Mr. John Johnson, chemist of the Charity Hospital, for analysis.

The chemist's report showed that the portion of the viscera submitted to him for analysis contained nearly one grain of arsenious oxide (arsenic). Starting from this, the coroner, and afterward the grand jury, made a most searching investigation to find out how this arsenic could possibly have been ingested. The circumstances of the case, and the surroundings of the people involved, made it perfectly clear that the arsenic found could only have been ingested with the sherbet. Ordinary commercial red aniline, which had been used to color this sherbet, strengthens this supposition. At such a late date it was of course impossible to obtain any of the sherbet for analysis, but at the vendor's premises a bottle containing about four ounces of an alcoholic solution of red aniline was seized, and an ounce of this solution yielded one-quarter grain of arsenious oxide.

Some red aniline purchased from the same wholesale drug house from which the vendor had bought his aniline, was found to contain 1.6 per cent of arsenic; although the clerk selling same told the purchaser that it was the aniline usually sold to color confectionery and pastry. Mr. Johnson also analyzed the urine of the mother and young man passed three days after the accident, and in both found an appreciable quantity of arsenic.

As the ice-cream vendor asserted that only small quantities of the coloring matter had been used to color his sherbet, it looked somewhat difficult to explain the presence of such a large quantity of the poison in the one case. This, however, will be perfectly understood when the following facts are remembered:

The ordinary rosaniline, or red aniline, used in commerce, always contains a certain amount of arsenious oxide (arsenic), which becomes incorporated with it during its manufacture, some specimens being found to contain as high as 6 per cent of the poison. Now, for coloring purposes, an alcoholic solution of the aniline is used, but as this aniline is not totally soluble in alcohol, in all such alcoholic solutions a deposit remains, which deposit consists of crystals of exactly the same appearance as the original aniline crystals, but which are more brittle, and lighter. These crystals consist of a secondary red color, perfectly insoluble in alcohol, and of nearly the whole arseni-

ous oxide, or arsenic, which also is little dissolved by alcohol. In using an alcoholic solution of the aniline, unless the precaution is taken to filter the same, we may with a small quantity of the solution drop a large number of such crystals, which are highly poisonous, and which, being solid and heavy, may all collect at one portion, the bottom, of the thing colored, and thus, as in a sherbet, act as a severe poison to a few eating the contaminated portion. This is probably what happened in the case we have mentioned, and in this way it may be explained how it was possible for this sherbet to have contained poisoning for only a few out of the many who ate it.

This method of coloring eatables with impure aniline can also prove dangerous in the following way, which may also be the explanation in our case: The juice of any acid fruit, such as strawberry, when left in contact with metallic vessels made of copper, or tin in which the tin coating is partly worn off, and in which the iron underneath shows, always dissolves a small portion of the metal of the vessel, and when to this juice a solution of aniline containing arsenic is added, there occurs a decomposition between the metallic salt and the arsenic, and a precipitation of the arsenic in solid form, which, being heavier than the liquid, will generally drop to the bottom of the vessel, and persons partaking of that portion may take the whole of the poison, whilst those eating the other portions may escape uninjured. Either explanation satisfies thoroughly our case.

But even a filtered alcoholic solution of impure aniline may contain a large quantity of arsenic, if the solution be kept until old, and the bottle containing it is uncorked, for then the alcohol evaporates and the solution becomes more watery; and water dissolves arsenic much more readily than alcohol, that part of the arsenic which may have been undissolved in the perfectly fresh solution is dissolved in the evaporated solution. The solution then becomes correspondingly weaker in coloring matter, for with the evaporation of the alcohol part of the aniline is deposited, as aniline is partly soluble in water. In this way more of the solution is used to bring the aniline to the required tint.

With the grand jury, we regret very much that this unfortunate accident should have weighed so heavily upon so de-

serving a household, yet we feel that even it has not been without fruit, as it has undoubtedly been the cause of putting the public on its guard, and will probably cause our law makers to enact stringent laws against this indiscriminate use of dangerous drugs in the preparation of eatables. We note with pleasure the fact that our efficient board of health has already taken action upon this suggestion of the grand jury. One of the members of the board, Dr. Formento, at its last meeting introduced the following:

An Ordinance to protect the public health, and to authorize the inspection and regulation of the utensils and apparatus and materials used for the preparation and sale of liquids and food in licensed public places for human consumption, and to punish violations thereof.

Authority is hereby given to the board, through its proper officers, to inspect all public places in which food is sold, and to examine and inspect the utensils and apparatus used therein.

The ordinance furthermore specifies the punishment for violations of said ordinance. If utensils employed are deleterious to the public health, they must be discontinued. If notified and still utilized, the fine imposed shall be \$25 and imprisonment in the police jail for not more than thirty days.

The ordinance was adopted, and the secretary of the board directed to forward the proposed ordinance to the city council for passage.

THE REGULATION OF MEDICAL PRACTICE IN JAPAN (AND IN LOUISIANA).

Must we acknowledge that in the regulation of the practice of medicine we of Louisiana linger sadly in the rear? Compare our laws with those of the large majority of states in the union, and those of the European countries, and the fact becomes so patent that he who runs may read. But must we further acknowledge the humiliating reflection that, even judged by the standard of far away Japan, we are by no means in the van of progress?

Listen! According to Passed Assistant Surgeon A. C. H. Russell, in the *Boston Medical and Surgical Journal*, whose article appears in part in *Sci-I-Kwai Medical Journal* for May just received from Tôkyô, Japan, there are in Japan "six govern-

ment medical schools, including the medical department of the university of Tôkyô." "The course in all is four years. A preliminary examination on general education, including a knowledge of English [which seems not to be rigidly insisted on in some of our respectable (?) American schools], is required. * * * * A diploma from any one of these entitles one to practise medicine without further examination. The session begins the 10th of September, and ends the 11th of July. It is divided into three terms. [Here follows the scheme for each year of the graded course.] * * * There is a post-graduate course of one year, with an additional year, if desired, for the study of special subjects in hospitals.

" Besides the government schools, there are twenty-three private medical schools at different places. Tôkyô has three. For entrance to some of these a preliminary examination is required. * * *

" A man, in order to become qualified as a practitioner, either must graduate at one of the government schools, or must pass the examinations of the central board at Tokyo, or one of the local boards appointed by the government.

" On the central committee at Tokyo there are generally one or two members from the university, one each from the army and navy, and one from the home department. * * * At the first examination they are questioned on natural philosophy, chemistry, and physiology; at the second, on surgery, practice of medicine, obstetrics, ophthalmology, and diagnosis, and treatment of patient in the hospital. The examinations are written."

Let our public-spirited (?) senators of our most remarkable general assembly, just dispersed, take this food for reflection. Can they reconcile it with their duty to their constituents, and with their loudly-heralded desire to provide for the public needs, that they permitted a petition of ten mercenary homœopaths so to impress them as to cause them, without investigation of the character or the motives of these petitioners, to vote down a bill, already indorsed by the house of representatives, and on the very face of it plainly intended to benefit the people of the state, and calculated in no manner (as an honest reading of the bill in June number will make

evident) to work injustice or hardship to any set of practitioners, however exclusive, not even the homœopaths themselves?

Will the homœopaths *insist* upon occupying the position of opposition to that which is honest and progressive in medicine and promotive of the public weal? Further, they urge that this medical-practice act would damage the interests, forsooth, of our (*their*) university, ignoring completely (and intentionally, we believe, for an *argumentum ad hominem*) the fact that the university's medical department practically indorsed the bill through one of its faculty, who was chairman of the committee of gentlemen who drew up the act on behalf of the State Medical Society. Truly, consistency, thou art a jewel; but no jewel sparkles here.

Let these reverend "seniors" understand now that the respectable medical men of Louisiana will push this matter until success shall crown their efforts, and until the quack, of whatever complexion or "tenets," shall, like the carpet-baggers, have packed their wares and moved to some more congenial clime.

COMMENTS.

THE *Buffalo Medical and Surgical Journal*, for July, 1890, pays us the compliment of publishing our editorial in the June number entitled "The Beginnings of a Great Thing." The compliment is appreciated.

THE New Medical Examiners' Law was passed by the legislature of the state of New York, and was approved June 5, 1890, we learn from the *Buffalo Medical and Surgical Journal*, where the full text of the bill is given. This bill provides for three separate examining boards, one representing the Medical Society of the state of New York, one the Homœopathic State Medical Society, and one the State Eclectic Medical Society, each board consisting of seven members, the appointments to be made from a list of nominees, furnished by the respective societies, by the Board of Regents of the University of the state of New York. Each Board of Examiners

must hold one or more stated meetings in the year, for examination of applicants, but each examination is under the supervision of an examiner appointed by the Board of Regents. The several boards must submit to the Board of Regents questions in anatomy, physiology, and hygiene, chemistry, surgery, obstetrics, pathology, and diagnosis, and therapeutics, including practice and materia medica. From these lists the Board of Regents selects the questions, which are to be so selected as to require the same standard of excellence from all candidates, except that as to therapeutics, practice, and materia medica, the questions are to be in harmony with the tenets of the respective school desired by the candidate. The papers are then returned to the Board of Examiners, which examine and report back averages, with questions and paper, to the Board of Regents. The Board of Regents thereupon issue certificates to practise. All candidates applying for this certificate must present a diploma from a recognized medical school, with evidence that they have studied medicine three years, including three courses of lectures, in different years, or they must show a certificate from examining boards of other states, whose standard of requirements is substantially the same.

CHANGES IN FACULTY.

The following changes have been made in the Faculty of the Medico-Chirurgical College:

Dr. J. M. Anders transferred from Diseases of Children to Clinical Medicine; Dr. Ernest Laplace made Professor of Pathology and Clinical Surgery, and Dr. Samuel Wolfe, Professor of Physiology.

[We congratulate our friend, Dr. Laplace, upon his election to the chair of Pathology and Clinical Surgery.—Eds.]

HAIR TONIC.

As a stimulating tonic for the scalp, Rabow recommends the following:

Spts. saponis.....	100.0
Aq. coloniensis, aa	2.0
Fr. cinchonæ co.....	

—*St. Petersburger Med. Woch.*

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

SURGERY.

REMOVAL OF THE HAND-CENTER FROM THE CORTEX CEREBRI
IN A CASE OF FOCAL EPILEPSY.

Let me now narrate the history of the case upon which I shall operate to-day. The little boy, Willie P., aged six years, comes from Delancy, N. Y. When fourteen months old he fell from a haymow a distance of ten or twelve feet, upon a plank flooring. He was brought into the house unconscious and remained so for some time. He was examined from head to foot, but no evidences of injury could be found. It is not positively known that he struck upon his head at all, although it was thought so from the unconsciousness which followed the fall. His disposition soon after this changed materially for the worse. He became irritable, obstinate, and ill tempered, and has remained so up to the present time, and to such a degree that when he was referred to Dr. Hansell for examination of the eye-ground, a few days ago, he bit and scratched so violently that, in order to have a satisfactory examination, etherization was necessary. At two and a half years of age, he had dysentery, and on the second or third day of this sickness, January 6, 1886, his first epileptic fit occurred. He has, therefore, been an epileptic four years. His attacks usually occur from three to six times *per diem*, with intervals of comparative freedom from them. His father, an intelligent clergyman, estimates that in the four years, he has had over 5,000 fits. Of these about 80 per cent began in the right hand, while the other 20 per cent began in other parts of the body. A year ago, for a time, they began in the face. He has suffered also from a number of attacks of *petit mal*.

When he came here I immediately placed him in the hospital under the charge of a competent nurse, who had been familiarized with such cases in the Philadelphia hospital. My object in placing him under her care was to obtain exact observations of the character of his fits. I regard this point as of great importance. Never rely too much on the statements of parents or other relatives. Invariably, and very properly, the impulse with them is not to observe but to succor the patient. The nurse, whose sympathies were not specially involved, was strictly enjoined to make the most cold-blooded scientific observations of his attacks, being careful, of course, however,

to see that the boy did not injure himself in any serious manner. "Do not touch him," I said to the nurse; "simply look at him; see everything; make a note of it the moment each attack is over, no matter whether they appear precisely alike or not; then give me the result." This result I have now obtained in some twenty attacks.

First, the child fell; his eyes were fixed, the pupils being immobile to light, as was ascertained by the nurse with a match. The eyes usually turned to the left, but the head turned to the right. The right hand began to tremble violently and then became flexed. The whole arm was then raised in front of and across the chest. The convulsive movements then became universal. Sometimes the boy will not fall, but will run to and fro within a very limited area. A rather unusual observation of his father's is, that a large dose of bromide was almost always followed by paralysis of the right hand. When the attacks began the child had a vocabulary of about forty words, but gradually he lost this vocabulary, word by word, until it has come down to three words and a little jargon. He says "papa" and "mamma" and "no," but never "yes."

Dr. Hansell has tested his eye-ground and found nothing abnormal. His sense of vision he believes to be good, but the patient's age and disposition prevent absolute judgment as to this point. Word-blindness cannot be tested, of course; word-deafness does not exist, for he recognizes a command, and if in a good humor will obey it.

These are the facts in the case. Medically everything has been exhausted. What are the principles by which we may determine whether surgery can come to his aid?

Cases of epilepsy can be divided into the traumatic and non-traumatic varieties; and again, in the traumatic variety the injury may have been either in the motor zone or in the so-called latent zones. This diagram of the brain centers, as ascertained by experiment upon animals, shows the motor zone with the centers for the head, and, from above downward, those for the leg, the arm, and the face; and in the arm center, from above downward, the centers for the shoulder, the elbow, the wrist, and the hand. Notice that in this boy the center for the right hand is, presumably, the focus from which originates the spasm, and near it is the center for the right face, and yet lower down, but near by, the motor center for speech. Now, as I stated to you, his face was involved for a time, and his speech has become limited, and there is also a certain aphasic character to it,

If there be an old, depressed fracture over the motor

area corresponding to the muscles first involved in the epileptic attacks, it would be proper to trephine at once, and treat the brain as the facts discovered by the trephining would indicate—probably by excision of the center for such initial spasms.

But suppose, now, as in the first specimen which I showed you, there is a scar over the motor zone but no depression of the skull and no positive evidence of injury to the brain. It would not be wise for you to trephine at once. First, the scar should be excised, as was done in that case. If the attacks return and still begin in the muscles supplied by the cerebral center lying directly under the scar, then it would be justifiable for you to trephine and to remove the portion of the brain in which the spasm begins. It would be right, I say, in the present state of our knowledge, for trephining is not at the present day a dangerous operation. The mortality from trephining *per se* is only about 1.6 per cent.

Note the expression I have just used, “in the present state of our knowledge.” Cerebral surgery has just begun, and we are making its history at present. While it is true that many cases have not been cured, not a few of them have been improved, and it is impossible for us as yet to say what surgery can do for them. It is only by trying, in the cases which afford a reasonable prospect of benefit, that we can tell. Were the operation dangerous to life, it would not, in my opinion, be justifiable; but, as I have stated, the danger is but slight, and it, as is probable, further experience will show us methods more satisfactory and efficacious than the present, an immense gain will have been made.

Secondly, you may have a case of traumatism situated in one of the latent zones—that is, the area of brain tissue, the functions of which have not been as yet ascertained. In these cases the propriety of trephining is still very doubtful unless evidence of injury is very decided, and especially unless there be a distinct depression.

There are certain centers, as that for sight, to which the same reasoning will apply as is applied to the motor zone. If evidence of injury is clear; if there is hemianopsia from injury to one cuneus, for example, it would be proper to trephine; but where the evidence of injury and the symptoms are doubtful it would be wiser at present to wait.

Thirdly, in the clearly non-traumatic cases, as a rule, it is best not to trephine, for we are in great doubt as to what part of the brain is the seat of the lesion. Especially is this the case in those long-standing epileptics in whom the “epileptic habit,” as it has well been termed, is so established that the fits will continue in spite of any operation.

One exception may be made, the so-called "focal" epilepsies, in which the spasms begin always, or nearly always, in one part of the body. Removal of the center supplying these muscles may in time be proved to be the proper course. At present we are gathering the evidence, but it is not yet all in, and until we have a much larger experience than at present it would be unwise to be too dogmatic.

Now, let me apply these principles to the case in hand. It is uncertain whether this is traumatic, and, naturally, you will ask me if I have shaved the patient's head in order to determine whether any scars exist. I have not done so, because his willfulness is such that he could only have been shaved during anæsthesia, and that will be the first step in the operation. His hair, however, has been cut sufficiently short for me to ascertain almost positively that there is no visible scar either over the center for the right hand, or at any other point. Shaving of the head is, in my opinion, an indispensable prerequisite to a careful diagnosis. Unknown scars I have constantly found, and in the boy from whom the first specimen came, the scar that was thought to be the result of the fall was not over the injured portion of the brain, but it lay under another one not far away, and of this scar no history could be obtained.

I have determined in the present case, in spite of the fact that no scar exists, to examine the center for the right hand on account of the immense preponderance of attacks in which this is the initial part of the body involved. It is not at all improbable that the boy may have been injured over this area by the fall, which though not producing any scalp lesion, yet may have ruptured or otherwise injured the brain tissue underneath. Whether this is so or not can only be ascertained by an exploratory operation. Having shaved the boy's scalp, the next thing is to map out his brain. Here are two instruments, Horsley's and Wilson's cyrtometers. I shall use Wilson's in this case, as it gives the location of the fissures of Rolando proportionally, instead of in inches, and I prefer it especially for this case, because the patient is a child, and to apply the same measures in inches to his head as to that of an adult might lead me into error. The fissure of Rolando extends from near the middle line at a point posterior to the glabella of 55.7 per cent of the distance between the glabella and inion and runs downward and forward at an angle of 67 degrees. I mark it now with an aniline pencil by means of Wilson's cyrtometer. In an adult the length is three and a quarter inches; I shall assume it to be three inches in this child. Having fixed the fissure of Rolando, I can readily

locate the position of the hand center by means of this diagram of the cerebral centers, and it is over this center that I shall trephine. The child's head, after the hair was cut, was very carefully scrubbed yesterday with soap and water, then with ether, then with bichloride solution (1:1000), after which a dressing of bichloride of the strength of 1:2000 was applied, and, as you saw, was still remaining upon his head when he was brought into the room. While in other parts of the body a dressing of the strength of 1:1000 will do, I have found that to the recently shaven scalp a dressing of 1:1000 is irritating and often pustulates; therefore, it is always well to use a dressing no stronger than 1:2000. The disinfection was repeated to-day with special care in consequence of not having been able to shave his head yesterday.

Next, I will mark the line of the fissure of Rolando on the skull itself, by making two little cuts in the scalp at the upper and lower ends of the line of fissure, and then with a small gouge through these cuts I make two little nicks in the bone. You can readily understand that when I have raised the flap, and with it the mark of the aniline pencil over the fissure of Rolando, there would be nothing on the skull itself to guide me. These little nicks, then, will show me the two ends of the fissure of Rolando, and, therefore, where the fissure itself lies.

Next, I make a large horseshoe-shaped incision with the convexity upward and reaching well toward the middle line. Each vessel that spurts on the scalp I seize at once with hæmstatic forceps until the field of operation is almost dry. You need not fear to grasp the entire thickness of the skin, or even of the scalp, in the bite of the forceps. Even though the skin is severely compressed by them for an hour or more it never sloughs.

With this trephine I remove a disk of bone an inch and a half in diameter. The dura being exposed, I carefully lift it by a tenaculum one-eighth of an inch from the margin, and make a little nick in it sufficiently large to admit the point of a blunt pair of scissors. This nick is made at the upper part of the trephine opening. I then divide the dura circularly throughout three-fourths of its circumference, leaving the remaining quarter as a means of sustenance and nourishment. This base of attachment is best left below, because the vessels come from below upward. In cutting the dura you will notice that I have lifted it very carefully with my forceps. I am very careful that the scissors shall not injure any of the large veins beneath. The brain is now exposed, and, to the eye, nothing seems abnormal. Next, I examine it by touch, and herein comes the value of experience. I have now had my finger on the living

brain substance fifteen times, and I am able to determine far better than two years ago, at my first operation, what is normal hardness or softness and what abnormal. In this case I find nothing abnormal. In the exposed brain precisely under the line where I marked the fissure of Rolando you can see a fissure which is evidently the one we are seeking. I shall next locate the hand center by means of the battery. From the moment that the brain was exposed no antiseptic solution has been applied to it; my reason for this being that, as Horsely has shown, all antiseptics diminish the susceptibility of the cortex, and we are apt to get no response from the faradic current. Touching the lower part of the convolution, in front of and behind the Rolandic fissure, I get no response, as you see. Touching it a little further up, the thumb moves, and a little higher still, the wrist. But as I am now so near the edge of the opening in the bone, and may have trouble from these large dilated veins, in order to have more room it is necessary for me to enlarge the opening with a pair of rongeur forceps until I get an area sufficiently large for my manipulations, and space sufficient to cope with what I expect will be rather free hemorrhage from the veins.

Again applying the battery you see the movements of the thumb, and now of the wrist, and, further toward the middle line, of the elbow. Having fixed by this means the position of the hand center, I now excise it. The hemorrhage, as you see, is very abundant; much more than any that I have previously seen. It is chiefly from one of the large veins near the superior longitudinal sinus. Hæmostatic forceps hold some of the cerebral vessels well, but these veins are so fragile that they tear with the weight of the forceps. Next, by water as hot as I can comfortably bear in my manipulations, probably about 120 deg., I try to arrest the hemorrhage, but the vessel is too large, and I shall, therefore, ask Prof. Forbes to place his finger on it while I pass a strand of catgut immediately under it. Tying this with great care, gently, and with exactly equal tension on both ends, you see that the hemorrhage is arrested. I will now test the cortex surrounding the excised part with the battery to see whether I have removed all the center for the wrist and hand, and you notice that the test shows that I have done so. Seeing that the hemorrhage is entirely arrested, I shall now introduce a drainage tube, sew up the dura, and put the bone back with a few strands of horse hair under the scalp and suture the latter. The piece of bone, you will observe, was placed in a sublimate solution (1:2000) in a cup, and this cup has been placed in a basin filled with hot water constantly renewed by an assistant whose sole business is the care of the bone, and who sees that the thermometer in the outer basin

constantly marks from 100 to 105 deg. Over the wound, which I have now closed, I place an abundant sublimate dressing and a bandage. The little patient, although suffering somewhat from shock, is not in a precarious condition, but I shall apply some external heat and get him to bed as quickly as possible. The operation is always a long one, and has lasted to-day over an hour and a half.

NOTE.—Speedy recovery took place, and the child was taken home three weeks later. Up to February, 1890, he was steadily improving. He had had a few attacks of *petit mal*, but no severe convulsions. His vocabulary has gradually increased, so that he is using twenty-three words—a gain of twenty—and combines them occasionally into sentences of two or three words. His disposition is greatly improved, so that he is much more docile and plays peaceably with other children. Dr. Colpin, in his report of the microscopic examination, states that there are distinct evidences of alterations of the structure, both in the vessels and the brain tissue. This will be more fully reported elsewhere.—*Medical News*.

MEDICINE.

DIPHTHERIA CURED BY ERYSIPELAS.

In the *Bulletin Médical*, M. Babtchinsky reports as follows: His son, while suffering from a most severe case of diphtheria, was suddenly attacked by erysipelas. This complication, grave of itself, seemed to hastened the fatal termination of the case, and during the first few hours of the eruption, the patient was much worse; the prostration extreme. But the next day the condition of things had changed, the patient progressively improved and made a good recovery.

Following this indication, Babtchinsky inoculated a second case of diphtheria with a culture of the erysipelas virus, made in agar-agar, and with an equally happy result.

Since this time, of fourteen cases of diphtheria treated with these inoculations, twelve resulted in recovery, and as in the two cases resulting fatally the inoculation of the microbe remained sterile, these negative results only tend to confirm the efficacy of this new treatment.

A remarkable fact in all these cases: The erysipelas process always remained of a mild nature, and terminated rapidly in recovery.

HEART-FAILURE CELLS.

In a recent article in the *Deutsches Archiv für klin. Med.*, (October, 1889,) Professor Hoffman again calls attention from a clinical standpoint to the significance of certain cells, to which he has given the above name, occurring in the sputum in cases of brown induration of the lung in mitral disease, myocarditis, and pericarditis. These cells are distinguished by their size, more or less oval form, and beautiful balloon-shaped nucleus, but more especially by containing yellow and yellowish-brown to brownish-red and black pigment. It is not easy to confuse them with other cells. They resemble in all points the desquamated epithelium of the alveoli, and are characterized by their pigment shading yellow to brown. Hoffman regards the heart-failure cells as desquamated alveolar epithelium, and considers their presence in the expectoration as a sign that brown induration of the lung is present. Prof. Sommerhard refers the irorigin to proliferation of alveolar epithelial cells, which swell up and absorb the red blood corpuscles extravasated into the lumen of the alveoli, becoming ultimately pigmented by the alteration of the corpuscular coloring matter. Hoffman maintains, however, that in the lung in heart failure these cells are derived from those under the epithelial covering, and partly by diapedesis, partly by capillary hemorrhages into the lung tissue, obtain their pigment. Whatever view may be taken of the derivation of their pigment, their significance as a sign of heart failure does not seem to be questioned.—*Amer. Pract. and News.*

BOOK REVIEWS AND NOTICES.

A New Medical Dictionary: Including all the Words and Phrases Used in Medicine, with their Proper Pronunciation and Definitions. Based on Recent Medical Literature. By George M. Gould, B. A., M. D. With elaborate tables of the bacilli, micrococci, leucomaines, ptomaines, etc., etc. Philadelphia: P. Blakiston, Son & Co., 1890. New Orleans: Armand Hawkins, 194 Canal street. Price, \$3.25.

This new dictionary is a well gotten-up and handy volume of 520 pages.

There are several excellent dictionaries before the medical world, but we feel that Gould's New Medical Dictionary will prove a valuable addition to those already in existence. In the preparation of his work, Dr. Gould has constantly kept certain

points in view. He has chiefly striven to collect all the new words and phrases introduced in the last ten years; of these, only those which seem destined to survive have been selected. Again, obsolete terms have been omitted. The definitions are clear and concise. These features are enough to commend the work to the busy practitioner and the student in medicine. In addition, Dr. Gould has inserted some very useful tables, namely, of the bacilli, micrococci, leucomaines, ptomaines, arteries, ganglia, muscles, nerves and plexuses, weights and measures, thermometers; also analyses of the mineral springs of the United States, and tables of vital statistics. An index of the twenty-two tables on the fly-leaf, opposite the title page, saves some time and labor to the seeker after information.

Dr. Gould's dictionary is not encyclopedic, and perhaps does not contain definitions of words that would be sought for only by a bookworm or a historical compiler; but the book does contain the definitions of living medical terms, and is hence valuable to students and physicians who live in the present rather than in the past.

A. McS.

Essentials of Diseases of the Skin, including the Syphilodermata. Arranged in the form of questions and answers prepared especially for students of medicine. By Henry W. Stelwagon, M.D., Ph.D., Attending Physician to the Philadelphia Dispensary for Skin Diseases; Physician to the Department for Skin Diseases, Howard Hospital; Dermatologist to the Philadelphia Hospital; Lecturer on Dermatology in the Woman's Medical College; Physician to the Service for Skin Diseases, Northern Dispensary, etc. With seventy-four illustrations. Philadelphia: W. B. Saunders, 1890.

This book, in *Saunders's Question-Compends*, succeeds remarkably well in covering the essential points to be mastered by the student of diseases of the skin.

The arrangement is in the form of questions and answers, and thus careful definition is necessitated throughout the work.

This we consider the chief recommendation of Dr. Stelwagon's book, and one which should recommend it to advanced students and practitioners of medicine who desire to perfect themselves in dermatology. It is the experience of most clinical teachers of dermatology—and this science can not be taught in any other way—to encounter students unable to describe lesions in the terms commonly used by specialists. We find defined in this work such expressions as "discrete," "multiform," "marginate," "gyrate," and others, which are

the alphabet of dermatology. The illustrations are good and of material aid to the reader, and where they are omitted the reader is referred (by volume and page) to the large atlas illustrations of Fox, Duhring, Taylor, and Morrow. H. W. B.

MEDICAL ITEMS.

THE WILLIAM F. JENKS MEMORIAL PRIZE.

The Second Triennial Prize, of Four Hundred and Fifty Dollars, under the Deed of Trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on

“THE SYMPTOMATOLOGY AND TREATMENT OF THE NERVOUS DISORDERS FOLLOWING THE ACUTE INFECTIOUS DISEASES OF INFANCY AND CHILDHOOD.”

The conditions annexed by the founder of this prize are, that the “prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children: and that the “Trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said Trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia.”

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1892, addressed to Louis Starr, M. D., Chairman of the William F. Jenks Prize Committee.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

MORTUARY REPORT OF NEW ORLEANS

FOR JUNE, 1890.

CAUSE.	White	Colored...	Male	Female...	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	6	6	7	5	7	5	12
“ Intermittent	1	1	1	1		2	2
“ Remittent	6	2	7	1	2	6	8
“ Congestive	7	2	3	6	4	5	9
“ Typho-Malarial.....	3		1	2	3		3
“ Typhoid or Enteric.....	2	4	2	4	4	2	6
“ Puerperal		1		1	1		1
Scarlatina	1			1		1	1
Small-pox							
Measles	7	4	3	8	1	10	11
Diphtheria	2	1	3			3	3
Whooping Cough	2	2	1	3		4	4
Meningitis	20	4	9	15	2	22	24
Pneumonia.....	14	12	13	13	13	13	26
Bronchitis	8	9	9	8	4	13	17
Consumption	31	32	23	40	58	5	63
Cancer	15	3	4	14	18		18
Congestion of Brain.....	12	4	7	9	5	11	16
Bright's Disease (Nephritis)	11	6	9	8	17		17
Diarrhœa (Enteritis)	31	23	27	27	16	38	54
Cholera Infantum	43	16	21	38		59	59
Dysentery.....	6	4	6	4	9	1	10
Debility, General	4	3	4	3	7		7
“ Senile	8	10	6	12	18		18
“ Infantile	7	9	7	9		16	16
All other causes	185	116	151	150	176	125	301
TOTAL	432	274	324	382	365	341	706

Still-born Children—White, 24; colored, 15; total, 39.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 28.10; colored, 47.31; total, 33.35.

DIPHTHERIA RECORD FOR JUNE, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	1		1	1	1		1
2	2	1	3	2		1	1
3				3			
4	1		1	4			
5				5			
6	2	1	3	6	1		
7				7			1
	6	2	8		2	1	3

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—JUNE.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Max.	Min.		
1	74	79	69	1.09	Mean barometer, 30.065.
2	78	84	73	.02	Highest barometer, 30.202, 10th.
3	78	84	73	.02	Lowest barometer, 29.895, 1st.
4	80	89	72	O	Mean temperature, 80.6.
5	80	88	73	T	Highest temperature, 94, 29th; lowest, 69, 22d.
6	79	86	72	1.83	Greatest daily range of temperature, 21.
7	80	88	71	.04	Least daily range of temperature, 9.
8	79	84	74	T	MEAN TEMPERATURE FOR THIS MONTH IN—
9	80	88	71	.31	1871..... 81.9 1876..... 80.4 1881..... 84.3 1886..... 78.7
10	80	86	74	O	1872..... 80.5 1877..... 81.1 1882..... 81.2 1887..... 79.3
11	81	88	74	T	1873..... 80.1 1878..... 82.2 1883..... 80.7 1888..... 77.3
12	80	87	72	.01	1874..... 81.0 1879..... 81.0 1884..... 79.4 1889..... 78.2
13	82	90	74	T	1875..... 79.8 1880..... 80.0 1885..... 82.2
14	81	88	74	T	Total deficiency in temp'ture during month, 11.
15	83	92	74	O	Total deficiency in temp'ture since Jan. 1, 470.
16	81	88	74	.45	Prevailing direction of wind, S.
17	83	92	74	O	Total movement of wind, — miles.
18	81	89	73	.39	Extreme velocity of wind, direction, and date, 30 miles, S. E., 6th
19	82	91	74	O	Total precipitation, 7.71 inches.
20	80	88	72	.11	Number of days on which .01 inch or more of precipitation fell, 14.
21	82	88	75	.10	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN—
22	80	90	69	1.59	1871..... 8.61 1876..... 6.20 1881..... 2.84 1886..... 9.37
23	74	79	70	1.58	1872..... 5.34 1877..... 2.75 1882..... 2.71 1887..... 11.33
24	80	87	73	.17	1873..... 6.22 1878..... 7.35 1883..... 12.05 1888..... 9.09
25	82	90	74	O	1874..... 9.62 1879..... 2.96 1884..... 8.60 1889..... 7.62
26	82	88	76	O	1875..... 4.92 1880..... 9.43 1885..... 3.30
27	82	90	75	O	Total deficiency in precip'n during month, 1.48.
28	85	94	76	O	Total deficiency in precip'n since Jan. 1, 12.67.
29	85	94	76	O	Number of clear days, 8; partly cloudy days, 14; cloudy days, 8.
30	84	90	77	O	Date of Frosts, none.
					Mean maximum temperature, 88.0.
					Mean minimum temperature, 73.3.
					Dates of thunder storms, 1, 6, 16, 18, and 22.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer.*

PUBLISHERS'



DEPARTMENT.

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NEW SERIES:
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AUGUST, 1890.

VOL. XVIII.
No. 2.

NEW ADVERTISEMENTS IN THIS ISSUE.

	PAGE.		PAGE.
Baltimore Medical College.....	28	Louisville College of Dentistry.....	20
Claudel, E. & L.....	28	Moore-McGregor Medication.....	28
Dios Chemical Co.....	29	Sanitarium—"Sunnyside".....	28
Kentucky School of Medicine.....	28		

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Aletris Cordial.....	21	Osborne, Robert J.....	15
Battle & Co.....	11	Planten's Capsules.....	12
Bellevue Hospital Medical College.....	20	Reed & Carnrick.....	18
Boehringer & Soehne.....	10	Robinson-Pettet Co.....	2
Bowden Lithia Springs Co.....	26	Sanitarium—Von Gohren's.....	15
Cerebro-Spinant—I. O. Woodruff & Co.....	23	"Sanitas" Antiseptics, etc.....	1
College of Physicians and Surgeons.....	12	Schiffelin & Co., W. H.....	3
Cook, Gus.....	20	Scott's Emulsion.....	1
Crittenton, C. N.....	14	Sharp & Dohme—Druggists.....	16
Health Restorative Co.....	4	Svapnia.....	12
Jefferson Medical College.....	12	Tarrant & Co.....	17
Lehn & Fink.....	24	Tasteless Quinine.....	15
Listerine.....	9	The American Practitioner and News.....	22
Lilly & Co., Eli.....	8	Wagner Medical Manufacturing Co.....	7
Marchand's Peroxide of Hydrogen.....	30	Wheeler's Tissue Phosphates.....	15
Mariani & Co.....	5	Woman's Medical College.....	20
McDermott, A.....	15		
Medical College of Alabama.....	25		COVER.
Medical Dep't of the Tulane University.....	13-20	Buffalo Lithia Water.....	3
Medical Dep't University of N. Y.....	27	Fairchild Bros. & Foster.....	2
New York Medical Journal.....	10	Fellows, James I.....	4
N. Y. Pharmaceutical Co.....	6	Sharp & Dohme—Chemists.....	2

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

PUBLISHERS' NOTES.

MEDICAL PRACTICES and drug stores bought and sold Partnerships arranged
 Assistants and substitutes provided. Particulars free. Address, The Medical
 Transfer Bureau, Lynn, Mass.

THE KENTUCKY SCHOOL OF MEDICINE, at Louisville, Ky., closed its last session with 300 students, and will commence its thirty-fifth annual session, February 1st, 1891. Such a patronage to an institution that has been in existence a life time argues that its merits are appreciated—its age does not wither nor its custom grow stale.

ELI LILLY & Co., *Indianapolis, Ind.*:—I am fully satisfied your SUCCUS ALTERANS has no equal as an alterative. I commenced using it on a patient on the 11th of June last. The lady was covered with sores from the top of her head to the soles of her feet, and three bottles have entirely cured her, she thinks, but I prevail on her to continue the medicine for at least six months longer. Yours respectfully,

L. R. POOLE, M. D., *Maysville, W. Va., Sept. 10, 1889.*

"A GOOD WINE NEEDS NO BUSH." So feel and say FAIRCHILD BROS. & FOSTER concerning their Pepsin. Making no claims they cannot substantiate, they but ask a practical test to confirm their "reasons for specifying FAIRCHILD'S PEPSIN."

HAVING RECEIVED your kind letter, pamphlets, and samples in due time, I gave in a severe case: relapse of influenza, 6 FEBRICIDE PILLS, one to be taken every four hours. At my next visit, after the patient had taken five pills, I found him at his supper table enjoying a hearty meal.

Being restless at night from overwork, I take one pill of FEBRICIDE before retiring and I sleep comfortably all the rest of the night. I am convinced it is a sure safeguard for every physician to have his case supplied with those pills.

C. A. BRUEGMANN, M. D., *Hartwell, Neb., Feb. 18, 1890.*

UNDER THE NEW REGIME of this old reliable medical journal, it has taken a new lease of life and is rapidly making new friends. Among them may be mentioned the manufacturers of WAGNER'S INFANT FOOD, who were among the first to notice the improvement and show their appreciation. The advertisement of this reliable firm can be found on page 7, front.

AMERICAN & CONTINENTAL "SANITAS" Co., Limited. *Gentlemen*:—I have used the "SANITAS FLUID" for vaporizing the air of sick rooms in cases of diphtheria, for wound dressing, and the irrigation and disinfection of abscesses, and am well pleased with its effects. I have noted no bad effect from absorption. The Crude Fluid I have found to be the best disinfectant I have ever used for discharges, &c.

Very truly yours, CHARLES ADAMS, M. D.,

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THE ADVERTISEMENT of SHARP & DORME has been appearing in this journal to the writer's knowledge for at least the last 14 years. It is a pleasure to refer to such an institution, whose products may be aptly judged by their advertisements: regular in form; unvarying in quality; reliable in composition; and unquestionably worthy of the best consideration.

J. E. PRICHARD, M. D., BALTIMORE, MD., says:—The Aletris Cordial I think a most excellent remedy and have used it in ten cases of suppressed menstruation in all of which with the best results. Among my patients were four unmarried women, one aged 20 years, had her menstruation arrested six months, when she came under my care. She was swollen and suffered considerable pain at each monthly period, but she had no show of any catamenial discharge. I placed her on Aletris Cordial, teaspoonful doses, three times a day. She continued it for seven days, when she menstruated. I ordered her to commence again five days before her expected time to menstruate, which she has done. She is now regular and suffers no pain. I have also used it in cases of vaginal leucorrhea with a happy result. In cases of hysteria which we sometimes find complicated with leucorrhea I have combined it with Celerina

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Celerina4 ounces.

M. Sig.—Teaspoonful every three hours for one day, then the next, would give it four to five hours.

I am happy to say that it has not failed to give relief in all cases in which I have prescribed it.

LUMBAGO.—A valuable internal remedy:

R. Ext. Cimicifugæ fl.....1 ounce.

Celerina (Rio).....7 ounces.

M. Sig.—Teaspoonful every four hours.

The usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page 2 of this number. "ROBINSON'S HYPOPHOSPHITES" is an elegant and uniformly active preparation; the presence in it of Quinine, Strychnine, Iron, Etc., adding highly to its tonic value.

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BROMINE-LITHIA WATER.—A fine Lithia spring has been known for some time at a little hamlet called Lithia Springs, in Douglas Co., Georgia. Recently an analysis has revealed the fact that it is the only spring known to science which contains Bromide of Potassium and Magnesia; this is combined with Lithium, Strontium and Iodide of Magnesium. The effect of this water is both a tonic and sedative, and in the army of nervous cases it gives promise of being a remedy of wonderful power. Theoretically a natural combination of the Bromides with Lithia and the Iodides would be a remedy of great value in a large number of cases. Practically, it has more than fulfilled these expectations, and although this water has been very recently introduced, there are many reasons for supposing that it will become the most widely used of any medicinal water known. Our personal experience in three cases of Alcoholic Rheumatism and Neuralgias is very satisfactory so far, and we hope to announce in the future that at last a remedial water has been found which can be given to all Nervous Exhausted cases with great certainty as to the results. As the Hot Springs of Arkansas is the great resort of rheumatic and syphilitic cases, this Bromide Spring of Georgia may become the great resort of Neurotics of all kinds. It is perfectly clear that under any circumstances this Water will become a popular remedy, and these Springs a famous resort in the near future.—T. D. CROTHERS, M. D., in "Quarterly Journal of Inebriety," for April, 1890.

SAMPLES of Sander & Son's "Eucalypti Extract (Eucalyptol)" gratis through Dr. Sander, Dillon, Iowa. Eucalyptol stands foremost as a disinfectant and antiseptic. Meyers Bros. Co., St. Louis, Mo., sole agents for the genuine product.

COCA IN HOARSENESS OF PROFESSIONAL SINGERS.—The *Journal of the American Medical Association* of May 3d, 1890, gives a valuable article entitled "Hoarseness in Professional Singers and its treatment" by Chas. E. Sajous, M. D., Lecturer of Laryngology and Rhinology, Jefferson Medical College. We extract the

following (page 645): "Of great assistance in the treatment of these cases, is the use of Coca Wine when taken not only a half hour before the performance, but at the end of each act, so as to obtain the benefit of "toning" action when the next act is about to begin. That the toning action is not due to the wine proper, as some believe is demonstrated by the fact that Sherry, the most alcoholic of all wines, does not at all give the singer the smoothness and ease of execution obtained from Coca Wine; while liquors tend to increase hoarseness, or to cause it. As demonstrated by Laffont, the action of Coca upon the nervous system is one of stimulation, which exerts itself principally upon the constrictor fibres of the sympathetic. The "toning" action of the drug on the larynx is thus clearly explained by the intimate functional relation between the vagus and the formation of the voice, which depends in reality upon the action of the constrictor muscles. The fact, however, that many of the Coca Wines on the market, are but solutions of Cocaine in either Sherry or Port Wine, renders it quite possible that anaesthesia of posterior portion of the larynx might be caused by contact with the drug during the act of deglutition, and thereby interfere with the functions of the vocal organ. I noticed this effect (a stiffness in the throat) while trying a number of brands to ascertain which would best serve my purpose. The preparation which I prescribe, ("VIN MARIANI,") made from the leaves, does not produce this effect, owing to the infinitesimal quantity of cocaine that it contains—or $\frac{1}{60}$ to the ounce—all anaesthetic action being furthermore antagonized by the tannic acid present not only in the leaves themselves, but in the exceptionally pure Claret forming the excipient. A great advantage of "VIN MARIANI," is that it exerts its action without giving rise to constipation. It can, for that reason, be administered continuously, with much benefit at times, in cases in which muscular weakness causes tremulousness of the voice."

HE WHO assists the physician benefits the race. Use Georgia Bromine Lithia Water, Doctor.

OUR JULY NUMBER.

The management desire to return thanks for the many unsolicited commendations of the superior make-up of the last number. It is pleasant to feel that efforts are appreciated, and it is encouraging to the continued endeavor to place this JOURNAL in its proper rank.

The demand upon this JOURNAL by the position it essays to fill are thoroughly understood by its conductors, and the success which they may attain will certainly not be endangered by a misunderstanding of their duties. At the same time they feel that without the friendly support of the mass of southern practitioners their work will be of no easy character, and they desire to enlist the consideration of the manifest advantages to the purpose of medical progress, which are conferred by a recognized organ of advanced medical ideas and practice. No industry or profession can advance that has no journalism specially enlisted in its behalf, and the state of any section's position, in any particular, is always reflected by the character of its journalism. The essence of value in a profession with such noble aims as that of medicine consists mainly in its progressiveness. That cannot be accomplished without interchange of thought. The more general the diffusion of such thought the more valuable becomes the truth contained in it. Medical journals are the best medium for this transmission of knowledge among medical men: it is therefore their duty to support that medium.

DOCTOR, have you tried the famous Bowden Lithia Water?

OUR SEPTEMBER NUMBER.

Owing to the length of DR. MATAS' article in this number, and its manifest importance preventing a division of it, the article by DR. LAWRASON, announced for this number, was unavoidably laid over.

DR. GEO. B. LAWRASON'S article for the September number will be on "VASCULAR NEUROSES." He will explain the phenomena of Hysteria in a manner consonant with modern pathology.

BUFFALO LITHIA WATER.

NATURE'S GREAT REMEDY

— IN —

Bright's Disease, Gout, Rheumatism, Dyspepsia, Etc.

DR. WM. A. HAMMOND, of WASHINGTON., D. C., Surgeon-General, U. S. Army (retired), late Professor of Diseases of the Mind and Nervous System to the University of New York, etc.: "I have for some time made use of Buffalo Lithia Water in cases of affections of the Nervous System, complicated with Bright's Disease of the Kidneys or with a Gouty Diathesis. The results have been eminently satisfactory. Lithia has for many years been a favorite remedy with me in like cases, but the Buffalo Water certainly acts better than any extemporaneous solution of the Lithia Salts, and is, moreover, better borne by the stomach. I also often prescribe it in those cases of Cerebral Hyperæmia resulting from over mental work—in which the condition called Nervous Dyspepsia exists—and generally with marked benefit."

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No. 3.

*Paullum sepultæ distat inertæ
Celata virtus.*—HORACE

The

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TABLE OF CONTENTS.

	PAGE.		PAGE.
Vascular Neuroses—By Dr. G. B. Lawrason	177	Yellow Fever and Quarantine	211
A case of Superfœtation—By T. S. Branch, M. D.	189	Medicine	211
Neat Method of Operation for Pterygium—By Dr. A. P. Boston.	191	Dermatology and Hygiene	211
Proceedings of Societies	192	Gynecology	217
Vienna Letter	212	Book Reviews and Notices	218
Kocher, on the Treatment of Old Dislocations in the Shoulder Joint.	219	Publications Received	218
The Rational Treatment of Tetanus	232	Medical Items	253
The Non-Union of Phthisis	234	Mortuary Report	258
		Meteorological Summary, July, 1890.	256
		Publishers' Department	257

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SEPTEMBER, 1890.

No. 3.

ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

VASCULAR NEUROSES. ✓

By Dr. G. B. LAWRASON.

Chair of "Diseases of Women" in the New Orleans Polyclinic.

There are few busy practitioners who do not meet, almost daily in their rounds, a set of patients—principally females—with symptoms which, though not grave, are sources of great discomfort and sometimes of great suffering. In their exaggerated forms, these diseases are classified under the head of hysteria, neurasthenia, melancholia, hypochondriasis, etc. In their milder forms, with the exception of giving a tonic or two at random, patients are joked at by their physicians, and their troubles made light of to try and persuade them that they are not sick. If they persist after that the patient is said to be run down, and a trip to the mountains or some watering place is prescribed, which is more for the purpose of getting rid of the importunities of a troublesome patient than with any idea as to the exact manner by which the benefit will be produced. It has been some time since I have found that procedure both unscientific in the doctor and disastrous to the patient, and I write this in hope that it may prove suggestive to some of my readers.

These patients are described as of a nervous diathesis. The blame is laid at the door of inheritance, and often this is as far

as it is considered necessary to go into the analysis of the case. But let us see if we can not find out something more about them.

I have always been struck with the pride of some families in speaking of their blue blood as a sure stamp of a long, aristocratic lineage. It is a proof, in fact a good proof, that their ancestors have been wealthy drones or hot-house plants using the luxuries of civilization to destroy the temple which nature planned so perfectly. Their blue blood means a sluggish circulation which is unable to feed their brains or their bodies. These cases, however, are not confined to the rich. As we have rich and poor man's gout, so we have nervous constitutions both in the rich and the poor, due to faulty nutrition in both. We are carnivorous animals, and rightly so, for I think it would be a retrograde step in evolution to become vegetarians; but being carnivorous animals, an indoor, inactive life, such as most women lead, is hardly compatible with the healthy functioning of their different organs—and more especially their digestive ones. Thus we have not only interference with the absorption of nutritive elements, but also with the elimination of waste products, producing a condition of ill-nutrition and irritability in tissue fed by poor and impure blood, the blood itself having a tendency, from its diminished alkalinity, to produce arterial dilation, increasing the tension and still further diminishing the nutrition.

There is another and powerful factor, however, which plays more than a secondary part in this wrecking process, and that is pain and worry; in fact all exhausting or disagreeable sensations. Our bodies were not made for pain—physical or psychical. If you take a brainless frog and stroke him gently on the back, in spite of the loss of brain, the frog will croak from the sensation of pleasure. In other words, a gentle stimulation of a sensory nerve produces such a feeling of well-being over the whole body of that frog that he will give vent to his usual method of expressing a condition of happiness. If you will look at the web of his foot, under the microscope, you will find the arterioles dilated, and his feeling of well-being is easily explained by the activity in the processes of nutrition and excretion. If that stroke on his back

is converted into a scratch or a pinch or a burn, there will be no croak, nor will stroking done at the same time be able to produce croaking. If you will now look at the web, under the microscope, you will find the end arterioles strongly contracted so as to almost completely cut off from the capillaries their supply of blood, thus allowing waste to accumulate, preventing the rebuilding of the tissues, and producing a general sense of distress.

Psychical pain, being only a retarded or repeated expression of a painful physical reflex, naturally does the same thing. I said our bodies were not made for pain. A painful irritation of a sensory nerve is only an exaggeration of that gentle irritation which would give pleasure; and we may compare the nerve current to an electrical current sent through a wire large enough to be carried without heat or other disturbance, or a current so large as to be beyond the capacity of the wire, thus producing more or less heat and irradiation. The large nerve current of pain would produce little disturbance where well insulated, but in the gray matter of a spinal cord, producing both friction and irradiation strongly stimulates the vaso-motor centers. The inhibitory centers being first reached, are first paralyzed by over-stimulation; the constrictor centers at a greater distance and protected by the diffusion of the irritant, except in great and long continued pain, are stimulated. Of course, in inflammatory conditions, where the stimulant is excessive and long continued we have paralysis even of these centers.

But there is still another factor to come in in our calculations. The arteries of the brain are surrounded by an external sheath, and the space between this sheath and the artery which it contains is called the pervivascular lymph space. This lymph space may be called the sewer of the brain, and depends upon the arterial pulsation for its current. In diastole, the artery about fills the space. In systole, the lumen of the space is considerable, so that you can understand how a wave of contraction starting from the base of the brain would have the effect of producing a more or less efficient current in the lymph. It has been found by observation on persons with defective skulls that these pulsations are increased during

sleep and lessened during waking hours; that the sounder the sleep the more and stronger the pulsations, reaching to from six to eight a minute; in troubled sleep being reduced as low as two, or exceptionally, even one. In waking hours, healthful mental work was found least damaging, reducing these pulsations only to three or four. Emotional conditions: fright, worry, distress, bring them down to two, one, or even less than one.

This explains how much a *sane corpus* depends upon the *mens sana*, for a day made up of mental disturbances, worries or pain will leave the brain poisoned by imperfect drainage of its waste product, producing a sleep so troubled, so disturbed by dreams as to be totally inadequate as a recuperative process, or we will have the insomnia so constantly complained of by these patients. This explains the fact also that sleep can scarcely be measured by hours—in one person the sleep of five hours being more than equivalent to ten hours in another. This explains also the superiority of night sleep over day sleep—the quiet of the night being so much less apt to produce disturbance and imperfection than the constant noises of the day. Now, a person with a constant high tension is a person with contracted arterioles and with dilated arteries, but not with an active circulation. The circulation is really sluggish. The heart beats fast because the overstretched arteries have lost their power to help it in keeping up the circulation, and its own beats are increased to make up for the inefficiency of their power, the reserve force being constantly called upon, so that unusual calls, such as running or ascending stairs, or surface chilling, whether produced by an emotion or a draft, will give rise to those distressing palpitations which are the most common and earliest of the different symptoms. Of course, such a constant overcontraction of these small arteries, if it ever is, does not long remain a healthy contraction, and resembles more a tetanic spasm. It is a paresis, and is liable to be suddenly converted into extreme paralytic dilatation upon the slightest provocation. Injuries or disease in some local nerve or organ, which though recovered from to all appearance, during periods of comparatively good health will show their intrinsic weakness by being the first victims of these breakdowns. Really absolute disease

is not necessary to make certain vascular areas the first victim of any mental emotion or worry. Any portion of the body which is the source of constant anxiety or care to the mind, from the oft-repeated nerve discharges along these special tracts, educates a better conductivity in those directions, carrying a greater quantity, pro rata, of the nerve explosion and more forcible contraction of the arterioles, to be more quickly succeeded by a more complete and more lasting dilatation. This may be illustrated by Darwin's explanation of the reason why women blush more easily than men, and why a blush is confined only to the face and neck. It can not be that the exposure to air makes the difference between that and the rest of the body, because the hands do not blush. It must be, as he says, because of the constant care and anxiety of us frail human beings, spent in trying to make the best of the features given to us by nature. This suggests the danger run by hypochondriacs of converting imaginary into real diseases. To my mind, for example, a strong and deep-rooted conviction that we have some fatal disease in a special organ is fully competent to produce that disease. The worry attending such a conviction will produce the disturbance necessary to cause the disease, and the fixed attention of the mind to the special spot will localize it.

The foregoing will show how protean are the forms of this class of diseases. I can best explain my ideas by saying that, leave out the nervous side, and the disease can culminate in gout. Let the nervous side preponderate, and hysteria, epilepsy, and insanity are its most exaggerated forms.

We now come to the most practical if not the most interesting side. Of late, a great deal has been written which shows that we are gradually coming nearer to a proper appreciation of these diseases. I will not even stop in this article to show how very much I am indebted to some late writers for my views, this paper being only preliminary to a much more extensive one. But almost invariably under the head of treatment we still meet our old friends tonics, electricity, trips away, etc., and we turn away, resenting the time and interest spent for the small return. We expected something better. We expected something we had not tried so often and found so often wanting.

The only thing left, then, was to see whether some treatment could not be devised based upon the theories described above. What have we to remedy? First, we must, by exercise and proper dress, enable the liver and other secretory and excretory organs to do their duty. Neither the circulation nor the respiration must be interfered with, for the abdominal organs can not work properly when the blood current is interfered with, both by constricting the blood vessels by pressure around the waist and impeding the aspiratory power of the thorax by interfering with diaphragmatic or abdominal respiration, a serious thing when we consider that the abdominal veins have no muscles to help on with the circulation, but depend almost altogether on the suction power of the thorax. Also the liver depends mostly upon the massage it gets from the diaphragm and from external pressure of the abdominal muscles for the activity of the bile current in the hepatic ducts. This explains the success of Dujardin-Beaumetz in his treatment of what he calls abdominal hysteria by gymnastic exercises, their main object being to develop the abdominal muscles. I do not think, however, it is necessary to have the complicated apparatus which he advises, as I have found at least equally efficacious the simple procedure of putting a stool about two feet from the bed; sitting down, facing the bed, the patient is directed to hook the feet under it, and, folding the arms on the chest, to let himself down as far as he can, keeping a downward position of the head about a half a minute, if possible, and pulling himself back with the abdominal muscles, into a sitting position. After resting about five minutes this may be repeated, so that with two or three seances the exercise can be repeated about twenty times a day. There is an object in this beyond the exercise of the abdominal muscles. The pressure will force the blood through the constricted arterioles, allowing both them and the areas they watch over a chance to nourish. As a typical example of how efficacious this treatment may be without the help of a single medicine, I will give here the history of a patient who has completely recovered, having seen me only once, and giving at the time such a history that would generally have secured to him a sentence of exile to some watering place or the mountains, with the torture of some bitter tonic.

The history is written by himself, without suggestions from me, as I was afraid my convictions would color the history.

“About a year ago, my eyes began to give me a great deal of trouble, from a condition of lowered vitality and overwork. For ten years they have given me more or less trouble in the way of double vision and general weakness, but with the use of prisms this was remedied. Three years since, I discarded the glasses almost entirely and kept up my work (consisting of literary pursuits) until about a year and a half ago, when I discovered a new feature of weakness. It became difficult for me to concentrate my vision on any object, small or large, chiefly print. Added to this there was a sense of pain about the base of the brain, though none in the eyes. This pain would immediately assert itself when the eyes were used much. It gradually grew worse and the parts affected seemed to become more sensitive when working, though they would be relieved by rest. The character of the pain was sometimes a sensation of tingling; sometimes a feeling of pressure or heaviness. I felt at times as though a weight was lodged in the rear lower part of the brain. Upon the advice of my physician, I resumed the use of weak far-sighted glasses, and though I got some help from this the pains continued more or less, if much work was done.

“On complaining of a sore throat, I was referred to Dr. L. for treatment. He told me that the throat was only a symptom arising from a condition of lowered vitality due to overwork and lack of exercise. At his advice, I commenced the following exercise: Assuming a position upon the end of a lounge, the lower limbs and seat resting along the couch, the back fronting toward the foot, I lowered the body from the hips as an axis, until the head nearly touched the floor, rising again slowly. This I did ten times successively, morning and evening. I noticed at once the effect upon the pains in my head. They were relieved at once, and the longer I continued the exercise the better the head became. In two or perhaps three weeks' time, my eyes were nearly restored to their former strength. To test the exercise thoroughly, I experimented as follows: I would work until the pain would assert itself and the head become confused, and then go to my exercise. In a few

minutes the pain would cease. Formerly, it took several days to remove the effects of a half hour's work. After exercising, I felt a sense of exhilaration throughout the body. My digestion seems to have improved, and I feel a general invigorating effect upon the nervous system. I find by experience that conscientious regularity in this exercise is absolutely essential."

In weak females, however, and in bed-ridden patients, the incapacity for so much exertion was so evident that I arranged a plank resting on a fulcrum, working like a see-saw, placing the head and feet alternately downward at different angles according to the judgment of the physician, the head never staying down longer than a minute. The results from this have been quite gratifying. When well and persistently done, a patient may take, without the slightest exertion on his or her part, the most violent vascular exercise. Alternations of blood pressure caused by gravity will dilate and contract the arteries, exercising their muscular walls, increasing their nutrition and forcing blood through them to feed the starved tissues.

Though well satisfied with the treatment, I found that it was almost impossible get to my patients to keep it up, even in those cases where it had done most good, beyond the point where comparative comfort had been obtained. I also found it a great trouble to persuade some to undertake it on account of the apparently ridiculous position, one of my patients telling me that a friend of hers, on seeing her lying with her head down—coming suddenly into her room—gave a piercing shriek that almost roused the neighborhood, on the supposition that she was committing suicide. Others have an idea that there would be danger of apoplexy, though it is evident that, used with judgment, a treatment which encourages improvement in the nutritioning and functioning of the arterial walls is certainly one that should tend to prevent apoplexy.

The following are a few diversified cases to which this treatment was applied, which I will leave without comment, as the paper is growing too long:

Case 1.—L., aged 7, was brought to my office for a chronic hoarseness. She had been treated for several months by a prominent specialist, at the time, with applications of powders which had not benefited her. The hoarseness was

peculiar. Her voice being clear on hallooing, sounded, when speaking, as if a violent cold had been taken, and on reciting, became completely lost for a few minutes.

On examination, the nose, which also had periodic congestions and flows without any clear history of their cause, was found in an unusually good condition, there being no deformities whatever. The vocal chords were also perfectly healthy to the sight. While the little patient was sitting in the chair she burst out crying, and on being asked if she was frightened, said no, she felt as if she had to relieve herself and she cried. The little patient was a bright, intelligent little girl of the Jewish race, apparently in good health. Her grandmother had been affected in the same way.

I told the parents that there was no real disease of the throat or nose, and that I thought if she was taken away from school and her attention drawn away from speaking, excitement kept away from her, and tonics of iron, cod-liver oil and nux vomica used, she would gradually improve. I told them not to be anxious about her voice, as it was a condition that would correct itself later without treatment. They were good patients and tried my prescriptions faithfully, with some improvement to her health, but none whatever to the voice. Their anxiety increased, and it became evident that unless I did something they would try somebody else, so that I concluded that I would try and gain control of the circulation in those chords by improving the tonicity of the arterial walls. She was too young to do any violent exercise, so that I used gravity in order to alter the calibre of the vessels, thus exercising the coats and improving their nutrition. This was done by means of a see-saw, the patient's head being placed down for a minute and the feet down for two minutes. This was faithfully done for from a half to three-quarters of an hour up to the writing of this paper—some six weeks. The first two weeks there was considerable improvement to be seen in the voice. After that the improvement was more gradual but steady. At the present writing my little patient has a stronger, fuller voice, more under control, though somewhat harsh; her general nutrition and appetite having also remarkably improved.

Case 2.—Mrs. R. has been a patient of mine, off and on,

for some time, for different things. She is an active, nervous little body, about 50 years of age, rather deaf, with numerous complaints, for which she had a new patent remedy everytime she saw me.

She complained a good deal of swimming in the head and palpitation, of dyspepsia, of costiveness, intense nervousness, and lack of sleep. She is always worried about something or other. Now it is her daughter, another time her money affairs.

About the middle of March I was summoned to see her hastily, and found her in the midst of a severe hysterical smothering attack. I had no chloroform with me, so I gave her hyperdermic injections of morphine, which slowly controlled the attack. This attack was not in the slightest degree asthmatic, the air entering the lungs freely, so that I can only explain her sense of suffocation by a supposition that there was a spasmodic contraction of the arterioles of the lung, preventing sufficient oxygenation of the blood and thus causing a sense of suffocation. It is one of those conditions in which chloroform is *par excellence* the remedy, as it is carried direct to the seat of the disease, and if given at the beginning only a few whiffs are necessary to relieve the condition. Morphine does not relieve this condition as quickly, as the contracted stage of the vessels, after the morphine injection, must give way to the relaxed stage, which is the secondary effect of the morphine. Considering the tetanoid as well as the paretic condition of those vessels due to malnutrition of the coats from insufficient exercise, I got my patient to lie down on a plank with a slope of about 30 deg. for a minute with the head down, and for two minutes with the feet down, alternately, from a half to three quarters of an hour twice a day. The patient came back in two weeks after having faithfully performed her gymnastics, saying that she was very much improved, and that she slept better, and was much less nervous. I then thought I would push matters, and told her to do that four times a day, a minute with the head down, and a minute with the head up, alternately. She came back in three days with almost all her nervous symptoms returned. I then put her back on the twice a day, with the old instructions, and she again began to improve, the nervous symptoms disappearing almost immediately. She says she feels now perfectly well.

Case 3.—This patient is a Bavarian, of the working class, with a considerable family, and could scarcely speak English. She had an anxious, startled look — very excitable, and has the unique, but very inconvenient, peculiarity of being able to bring on a genuine globus hystericus, with asthmatic symptoms of the most distressing kind, by putting her hands in cold water.

On examining her throat before dipping the hands, I found a varicose condition of the base of the tongue. After the hands were dipped there was a choking, smothering condition brought on, and the throat examined at that time showed a considerable swelling of the base of the tongue, and the varicose veins, instead of appearing to run on a plane surface, looked like small rivers running in little valleys, the base of the tongue becoming greatly swollen. I supposed the same condition extended through the bronchial tubes, as cocaine had no effect upon the asthmatic symptoms; the numbness of the throat frightened the patient very much, for she thought she was going to die.

I wished to try the effect of gravity in exercising on these arteries which seemed to have gotten beyond her control, and so explained as carefully as I could the method pursued in the foregoing case, but it was only two weeks afterward when she brought a friend with her as an interpreter that I succeeded in making her understand exactly what I wanted. What she had done imperfectly, though not controlling the asthmatic reflex, had enabled her to sleep more comfortably, using one pillow instead of three, as was her custom. I lost sight of her for about five weeks, when she came back to tell me she had improved very much after two weeks of the exercise; so much that she could scarcely feel any inconvenience from the cold water. After that she had gone to the country to nurse a relative, and though she had not kept up the exercise she had not gotten any worse. I increased the severity of the exercise, which she promised to follow faithfully. The patient is now well.

Case 4.—Mrs. P., a neurasthenic, has been in wretched health since the death of her husband, two years ago, due apparently to grief, overexertion, and perhaps malaria. The first indications were weakness of the eyes, causing pain at the base of the brain from the slightest use of them. There was a feel-

ing of tingling and heavy pressure. Long and absolute rest was required to recover from these attacks. She gradually grew worse, getting weaker all the time, occasionally having spells of weakness resembling heart failure, with nervous explosions followed by a sense of exhaustion, and at various intervals short attacks of ordinary malarial fever. She was treated with anti-periodic tonics, and for her nervousness, with chloral, bromide, etc. Electricity was tried, a constant current being applied at the base of the brain and neck, but this invariably resulted in pain and subsequent nervous depression.

The patient continued alternately better and worse until finally she was advised to secure a board, and, placing one end about eight inches higher than the other, to lie down for a few minutes with the head down, and then reverse—and so on, alternating, for a half hour a day. The relief of the pain followed almost immediately. The position with the head lowered produced such a sense of good feeling that she would lie with her head downward sometimes without changing the posture. For convenience the board was afterward placed on a fulcrum. This was found to be much better, as she could get all the benefits of the first procedure without the exhaustion of changing position so often. The most marked result has been the relief of the head symptoms, although the general health has also improved.

As I said before, the difficulty of getting patients to follow out this treatment caused me to turn my attention again to drugs to see if I could not get satisfactory results in improving nutrition by dilating the arterioles. In other words, decreasing the blood pressure, not by weakening the heart action, but by increasing the outflow. I have not yet a large enough experience with the drugs I have used to write authoritatively, but I have obtained very gratifying results with the nitrites combined with small doses of digitalis or belladonna, or both. In the choice of nitrites, sodium nitrite has so far been found most efficacious on account of its slow solubility and long-continued action. It may be given in doses of from two to three grains four times a day, though, as the susceptibility of patients to nitrites is so variable, no positive rule as to the dose can be given. I find that my patients almost immediately lose

their sense of constant tiredness, sleep better, and wake up more refreshed in the morning. That the relief is due to this medicine is shown by its being prevented or produced at will by taking or leaving off the medicine. The great objection to it is its nauseous taste. It should be well diluted when taken. The blueness sometimes produced is harmless, as I have seen improvement continued irrespective of that symptom, but I should say its appearance should be a sign for a diminution of the dose.

HOSPITAL REPORTS AND CLINICAL NOTES.

A CASE OF SUPERFOETATION. ✓

By T. S. BRANCH, M. D., Evergreen, La,

According to Playfair, "By superfoetation is meant the impregnation of a second ovule when the uterus already contains an ovum of a considerable degree of development." The cases which are supposed to prove the possibility of this occurrence are those in which a woman is delivered simultaneously of foetuses of very different ages, one bearing all the marks of having arrived at term, the other of prematurity.

Again, in the American System of Obstetrics, Dr. Fordyce Barker reports a case "of the delivery of two mature children from a woman with a double uterus, one male, the other female, at an interval of two months."

Hirst reports "cases of negresses bearing twins, one light, the other dark, showing, of course, different paternity." Upon such cases has been based the theory of superfoetation; but as there is no clear proof as yet of the occurrence of ovulation during pregnancy, the possibility of the impregnation of ovules which escape from their Graafian follicles at rather wide intervals of time, say, weeks or months, must still remain in doubt.

In the case I wish to report there was positively no reason to suspect a double uterus. I ascertained, by careful examination, that the contents were all expelled from one uterus.

On May 14, 1887, I was called to see Mrs. H —, a white woman, aged 35 years, the mother of six children. She had been in labor five or six hours. On examination I found a perfectly normal presentation, the os dilated to the size of a quarter, and I made myself content to await the completion of what I thought would be a natural labor. In due time, the

child (a girl) was born; rather small, but not enough so to attract attention—weighing five pounds, but fully developed in every respect. About the time I was finishing the ligation of the cord, and preparing to turn the child over to an attendant, another contraction came on. Thinking that I had only the management of a placenta, I made an examination, and to my surprise found presenting a small head. The next contraction expelled the foetus, and along with it came into reach another foetus with a breech presentation and was passed off with the next pain. They were both boys, and were dead, but showing every sign of recent life,

According to Hirst's American System of Obstetrics, "Should one foetus die during pregnancy, it is usually retained until term, when the living and dead children are cast off together, widely differing in appearance and development." "Or else one ovum may be aborted at an early period of pregnancy, while the other goes on developing till term."

Again, even though both children have been retained in utero an equal length of time, there is usually a marked difference in their length and weight, especially if they have resided in one ovum.

If these two foetuses had died when they were about four or five months old—and they were about that age, judging from their size and considering their imperfect development—it would have been very apparent.

Succeeding the birth of the two last foetuses, was the delivery of a well developed placenta, with full grown membranes, a full sized cord—all showing that they belonged to the matured child. There was delivered a second placenta, very little more than half the size of the former, with one small cord attached a little to one side of its center, another attached nearer the opposite end, all corresponding with and showing that they belonged to the two foetuses that measured only six inches.

RECAPITULATION.

Here we have two distinct amniotic bags, one containing a full term child with its fully developed membranes and placenta, another containing two foetuses with their one common placenta, to which their cords were attached, about two inches apart, and by their size, ossification, the development, the genital organs and general appearance, would have been taken for an abortion at the fourth month of gestation.

True, there were no signs of life, but from the appearance of the skin, the oozing of fresh blood from the cords, the perfect state of the flesh, I think it sufficient evidence that they had not been conceived at or even near the same time that the

mature child was; or had they been, and died when they arrived at the fourth month, and remained in utero till the other had arrived at maturity, there would have been every evidence that such was the case.

I simply report this case in support of the theory that impregnation can occur after the uterus has within it an ovum that has arrived at a considerable degree of development.

A NEAT METHOD OF DOING THE OPERATION FOR PTERYGIUM

By DR. A. P. BOSTON, New Orleans.

Several months ago, at the clinic, in the Eye, Ear, Nose, and Throat Free Hospital, Dr. Kennedy called my attention to a neat point in the operation for pterygium, which is original with him, viz.: to put in a suture near the corneo-scleral junction after separating the pterygium from the cornea, before proceeding further with the operation. Being anxious to know what the operation was, and how it differed from the numerous other operations described in the text books and journals, I watched the proceeding with great interest.

The method of operating is as follows:

The eye being cocainized and the lids separated, the operator takes hold of the pterygium with a pair of fixation forceps, raising it up from the surface of the sclerotic, passes a cataract knife behind it about two millimeters from the edge of the cornea, the cutting edge turned toward the cornea. He then separates the pterygium from the subjacent tissue up to the apex.

The remaining part of the operation is what I wish to call attention to. While the forceps are still in position, a suture is passed through the cut edges of the conjunctiva about one-half millimeter from the edge of the cornea. After the suture is tied the pterygium is left in a pucker, or fold, which is readily removed, while traction is made with the forceps by a simple cut with the scissors. After the conjunctiva is separated from the sclerotic two or three millimeters from the edges of the wound to allow perfect coaptation, one more suture is introduced midway between the first and the base of the pterygium, and the operation is completed.

I had the pleasure of examining the case two months after the operation, and the result was the best I ever saw.

I have since performed the operation a number of times, both in the hospital and private practice, with like good results. You never have troublesome granulations springing up after this method, as when the growth is removed piecemeal.

In Dr. Kennedy's operation he only introduced one suture, but in that case the pterygium was small. I find in cases where the pterygium is large that it is necessary to put in the second suture, as described above, in order to prevent too much of the sclerotic being exposed, and to favor a more rapid healing of the conjunctiva.

PROCEEDINGS OF SOCIETIES.

PROCEEDINGS OF THE MEETING OF THE STATE MEDICAL SOCIETY OF ARKANSAS, HELD IN LITTLE ROCK, MAY 14, 15, AND 16, 1890.

The morning session was devoted to organizing in proper working order, after which the meeting was called to order by the president, Dr. Zaphney Orto.

Prayer was offered by Rev. J. H. Dye. Then followed an address of welcome by Dr. C. E. Nash, and the annual address by the president.

The afternoon session was devoted to papers on the practice of medicine.

REPORT BY DR. C. WATKINS, CHAIRMAN COMMITTEE ON PRACTICE OF MEDICINE.

In the short space of time allotted to me, I desire to call your attention to a few of the new remedies that are of practical value. This age is prolific of new remedies, of which few stand the test of time, and strangely, too, we find some of the old time ones brought forward as specifics, by apparently careful observers, and we are led to hope that diseases like diphtheria and scarlet fever, for instance, are at last to be robbed of their terrors; but we shortly find that malignancy or death may not be so easily averted; and we go back to our rational treatment of calomel, the bichloride and chloral hydrate, preparations of iron, chlorate of potash, and spiritus frumenti.

The phenol group, the coal tar products, that have proved so wonderful and prolific to both science and the arts, gives us antipyrine, antifebrine, and sulphonal; medicines which, as antipyretics, analgesics, and hypnotics, are of real value. The former two, with a number of others of similar properties, have been more or less successfully used in whooping-cough, diabetes insipidus, chorea, and almost all forms of nervous affections. Sulphonal is a valuable remedy in sleeplessness; but in insomnia, in comparing the pure hypnotic strength of drugs, the list would read about like this: morphia chloral, amyline hydrate,

paraldehyde, sulphonal. But arranged with regard to least injurious results, would read: chloral, sulphonal, amyline hydrate, paraldehyde, morphia. So, many of the older medicines keep even step with the new, and neither are to be carelessly used, either as to immediate results or prospective habit.

“To carbolic acid, one of the early products of this group, are now added creolin, phenol, etc., that as anti-ferments, antiseptics, and germicides, are used both internally and externally, to meet many and varied conditions; none of the group are anodynes, strictly speaking. Carbolic acid as an escharotic is superficial, as compared with the mineral acids, and is in a marked degree analgesic and refrigerant.

“Many wonderful discoveries have been made in the germ theory of diseases in the last year, but therapeutics have not kept equal step with this theory and the microscopical discoveries. The germicides discovered so far that destroy these germs, outside of the human body, can not as a rule be applied for their destruction within the body.

“For diseases in which, as a rule, one attack gives immunity, inoculation or vaccination of a milder form of that disease may yet be extended. The Pasteur method of inoculations for the cure of rabies is yet on trial, and by practical statistics is yet far from proven. It differs widely from the vaccination of the immortal Jenner, in that it is supposed to substitute a milder for a more violent poison then present in the system. Borck's theory of syphilitic inoculation is much more plausible, disgusting and unnecessary as it is.

“In strophanthus we have a valuable substitute for digitalis, especially when the latter produces nausea, and from long use the resulting heart failure, caused, I think, by its secondary or sedative effect erroneously called cumulative. Mr. Ould, in the *New York Medical Journal*, says that strophanthus is a most excellent remedy, especially where we have cardiac complications, such as fatty degeneration, dilatation, or the weakness which occurs in long-continued diseases, as in typhoid, phthisis, and pneumonia, with the carbonic acid poisoning due to poor circulation and imperfect aëration of the blood. In this condition strophanthus is a valuable remedy to strengthen the weakened heart. Nux vomica is another valuable cardiac stimulant but its influence is more general, while digitalis, long continued, defeats the purpose for which it is given. Alcoholic stimulation often fails to remedy this condition, but in strophanthus we have a remedy which produces immediate and continued effect on the cardiac muscle, when given in the form of a reliable tincture. Five drops of the tincture may be given in a little water, and the dose repeated in urgent cases every hour or two.

Codeine, for the relief of pelvic pains, whether from prolapse or inflammation of the ovaries, is a valuable agent, and the relief afforded is more or less permanent. It is not so valuable in pelvic exudations or tubal diseases, and morphia gives greater relief in acute uterine and dysmenorrheal pain. The dose of codeine is half a grain, three times a day, in pill form.

"The use of the alkaloids, instead of extracts, tinctures, and crude powders, is, in my opinion, a step forward toward exactness in dosage and the dosimetric system after Burggräve, who claims it as a known and fixed system of exact dosage. I favor a fixed and exact dose of an alkaloid, given in minimum doses, and frequently repeated, as we can prescribe with an exactness not obtainable in the multiplicity of fluid and solid extracts, tinctures, syrups, etc.

"The practical physician must treat symptoms often, and may thus remove the disease at once. It will not do to stand on our scientific dignity and say 'I strike at the cause, which, if removed, the symptoms disappear.' Many symptoms, from functional derangement especially, where the most prominent one is pain, are often the essence of the disease; many symptoms are more distressing, more dangerous, and even overshadow at times the disease they represent. It is not very encouraging to a patient about to be deluged with dropsy, to be told that his liver is the diseased organ, and the dropsy only a symptom, and that when the liver is cured the dropsy will be well. It is possible that he could not wait, and the symptom, unless relieved speedily would cause his death.

"It is well to know what in disease certain pains are the symptoms; but it is far better to relieve the pains first, and attack the cause afterward. It need not hinder one's scientific attainments, and certainly gives more comfort and confidence to the patient.

"In this matter and in the form of medication, wherever practical, I am of the opinion the field is open for research; and it is a field that bids fair to be prolific of good both to doctor and patient.

"Gentlemen, we claim no peculiar name, nor sect, nor system, that is not open for competition to all the world. We have no patents, secret remedies, nor nostrums. We do not believe in the supernatural, or the impossible. Medicine has made great advances since the days of incantations and charms, but we do not claim it yet as an exact science, either as to diagnosis or treatment."

EPISTAXIS IN LIVER TROUBLE.

By J. C. MINOR, M. D., Walnut Ridge, Ark.

I report six cases, two of long standing, of obstinate epistaxis; the usual symptoms of the bilious disorders, frequently ac-

accompanied by malarial troubles existing. In all of these cases the hot douches, lemon juice, tannin, ergot, etc., were used, proving of no value except in two cases, the other four yielding promptly after irritating the region of the liver with a blister or yellow oxide of mercury ointment. On return of the malarial symptoms in two of the cases, the tendency to hemorrhage returned, but was easily controlled by the application of the yellow ointment to the right hypochondrium.

I have had for several months under my treatment a girl nine years old, apparently bright, cheerful and in good health, but who has been since early infancy subject to periodical attacks of epistaxis. The attacks have been usually protracted and prostrating, occurring about every two weeks, lasting sometimes four or five days and suddenly ceasing. About three months ago I prescribed during a severe attack, unguentum oxidi hydr.-flav., to be rubbed over region of liver and spleen, and directed its continued application night and morning for several days. Tinc. ferri chlor. was also administered during one afternoon, every two hours, in twenty drop doses. The bleeding ceased in four hours. Considerable irritation resulted from the use of the ointment. She has since had but one attack, which lasted only a few hours. The ointment is used occasionally in her case as a precautionary measure.

We rarely see cases of obstinate epistaxis, unless there is some want of vitality present, with an atonic condition of the capillaries. Many such cases are due to disorders of liver and spleen of malarial origin. Authorities disagree as to what forms of liver trouble are most common causes. I found enlargement of liver and spleen in all of these cases.

REPORT OF COMMITTEE ON SURGERY.

By B. HATCHETT, M. D., Chairman, Fort Smith, Ark.

Lister has discovered in the double cyanide of mercury and zinc a substance possessing marked antiseptic properties, and claims it to be free from the irritating and toxic effects of corrosive sublimate.

Prof. Billroth reports several cases of poisoning from the use of carbolic acid as an antiseptic. Iodoform is generally conceded to lack the antiseptic properties formerly claimed for it.

Drainage, in surgery, is entitled to attention as part of the antiseptic plan. As a rule, it is being used in abscesses of importance, sinuses, and openings in cavities.

Prof. Boeckel has discarded the practice of drainage in operative wounds.

Abdominal surgery has kept pace in the past year with its predecessors, and under improved technique and early resort

to operations, we now invade every part of the abdominal cavity with comparative safety.

Loreta's operation of digital divulsion of the pylorus for cicatricial stenosis, extirpation of the cæcum and appendix, though formidable operations, are now established procedure.

Recent improvements in topographical studies of brain lesions and those of the spinal cord, enable the surgeon to diagnose and mark out location with almost mathematical precision.

Cerebral tumors are now successfully removed, and abscess of the brain evacuated with success in 50 per cent of cases reported.

Dr. McEwen has successfully evacuated five ounces of pus from a cerebellar abscess, thus crossing the line beyond which surgeons had feared to pass.

Resection and suturing of nerves has proven successful in relief of paralysis and muscular irritability.

Forcible stretching of nerve in both directions, as first practised by Nussbaum, has been attended with gratifying results.

Drs. Thornton and Mears, of Philadelphia, have reported a series of cases of cholecystotomy relieved by the operation.

Statistics by Dr. Thomas show that abdominal section for hydatid of the liver is much preferable to tapping.

Splenectomy has been reported successfully performed a number of times. This procedure is indicated in enlarged, indurated, and otherwise diseased spleen, when all other means fail, and the patient has no leucocythemia.

The perineal section has been supplanted to a great extent by supra-pubic cystotomy, the convenience and safety of the later operation having won for it this prestige. The removal of calculi, morbid growths, and foreign bodies, from the bladder, by this route, has become a daily practice.

Extirpation of the larynx for sarcoma and carcinoma is strongly urged. European and American surgeons agree that laryngectomy for relief of carcinoma is generally followed by a return of the disease. Intubation in diphtheria and croup is rapidly becoming a *dernier resort*, taking the place of tracheotomy. Twenty-seven cases of acute obstruction, with thirteen recoveries, are reported by Dr. Guyer, of Zurich.

In the management of ectopic pregnancies, early abdominal section and removal of the foetal sack is approved by the most, and perhaps the abler advocates. While the destruction of the foetus by galvanism is practised, it does not seem more successful or less dangerous.

In the treatment of perityphilitis, Dr. C. McBirney advocates abdominal section and removal of the inflamed vermiform

appendix as early as a diagnosis can be made, and reports several successful cases.

The report of the second "Hyderabad Chloroform Committee" states that in forty conclusions, based upon 430 experiments made upon dogs, monkeys, goats, and horses, is that chloroform never causes sudden death from stoppage of the heart, but that respiration is always arrested before the heart ceases to beat; that there is no difference in the mode of death produced by chloroform and that produced by ether, save in the degree of rapidity.

Electrolysis for the cure of urethral stricture has proven a failure. Gradual dilatation gives only temporary relief, while the operation of dilating internal urethrotomy has proportionately gained in favor. Dr. Otis reported last September 166 cases of urethrotomy of the pendulous urethra without a death. It is now accepted that anterior to the triangular ligament it is the best operation, behind the triangular ligament, to dilate where possible; otherwise to cut externally.

The subject of bone-grafting has recently received considerable attention. Dr. Sherman, of San Francisco, reports two cases, in which he used grafts of animal bone upon the tibia. The pieces were one-third by one-fourth inches in size, and with periosteum preserved on them, were taken from dogs and chickens, and results were satisfactory.

Dr. Wyeth, of New York, reports an important improvement in the technique of amputation at the hip joint, adding it to the bloodless operations. His method is described as follows: Two long pins about the size of lead pencil, from eight to ten inches long, are thrust through the thigh in the antero-posterior direction. One enters just below the anterior-superior spine of the ilium, on the outer side of the thigh, and is pushed through; the other enters the inner side of the femoral vessels close to the flexure of the side and body, and is pushed through. Each pin embraces sufficient tissue to hold firmly. Around the thigh above the pins, a strong rubber tube is wound, the pins preventing the slipping downward or otherwise being displaced.

A circular cut is then made through the soft parts around and down to the bone, and the bone is sawed off. Then an incision is made along the outer side, to the trochanter major, or as near as the elastic tube will allow. The vessels are now all ligated, after which the head of the femur is dissected out.

Dr. J. A. Dibrell, Jr., reports in the case he saw Dr. Wyeth operate on, that there must have been a hundred ligatures employed; arteries, veins, in fact every bleeding point was ligated; after everything was ligated, the elastic band was slowly and cautiously relaxed, and other bleeding points ligated.

The operation has been made four times for disease; two have recovered. The third case, which Dr. Dibrell reports, was doing well several days after the operation, and the fourth case was operated on after Dr. D. left for Arkansas, and no report had been heard at this writing. Dr. Wyeth was to read a paper on this operation at the Nashville meeting of the American Medical Association.

NASO-PHARYNGEAL FIBROMATA.

By T. E. MURRELL, M. D., Little Rock, Ark.

Fibroid tumors occurring in the naso-pharyngeal region, spring from the dense connective tissue lying underneath the mucous membrane, commonly having their firmest attachment to and in the periosteum. Their most frequent point of election is the vault of the pharynx; thence extending in various directions, they encroach upon the nasal spaces secondarily. They occasionally arise in the nose primarily.

In the pharynx the tumor most frequently has its origin in the vault to one side of the median line, but many symmetrically occupy the base of the skull. Laterally, they may originate on the pterygoid or bony projection of the posterior nares, as on the vomer and posterior ends of the turbinated bodies projecting into the pharynx.

In the nose, the point of attachment may be on any of the bony points, but more especially in the vault of the posterior region; the septum, turbinated bodies, and cribriform plate of the ethmoid may also give attachment to fibroids.

In the pharynx, fibroids generally have a broad base and are commonly sessile, while in the nose they are generally pedunculated. In the pharynx they are generally single, and frequently multiple in the nose.

Their growth may be either very slow or rapid; ordinarily it requires several months to occasion much distress from their size. They grow in all directions, but chiefly where there is least resistance.

The cavities become tightly impacted with the growth; the more yielding bony parts then give way and are either torn asunder, pushed out of place, or absorbed.

In starting primarily in the pharynx the vault may be first filled, then one or both nasal passages, the soft palate may be crowded down, and even the mouth may be almost completely filled, as in a case reported by Dr. Lincoln.

Laterally, the extension may be in the pterygoid or temporal fossæ, or it may grow upward and pass through the sphenomaxillary fissure into the orbit, pushing the eye forward.

Extension forward into the choanæ will eventually crowd the bones of the face apart, widening and flattening the nose,

producing the frog-face appearance. Upward and lateral pressure in the roof of the nose will encroach upon the orbit, pushing the eye outward while pressure posteriorly may push it forward, giving a double displacement. When the tumor originates in the nose, the facial distortion is the first deformity observed. With the frog-face comes displacement of the eye on the corresponding side with the tumor.

The tendency of naso-pharyngeal fibroids is to degenerate into sarcoma or myxo-sarcoma. This is specially the case where unsuccessful surgical procedure has been adopted; at first very firm, later, soft spots are found in them, with islets of firm tissue still remaining; microscopically such structures are found as the character of the growth would indicate, dense, white, connective tissue, in irregular bundles and network, as in pure fibroids, giving them extreme hardness. The fibro-sarcoma or fibro-myxo-sarcoma partakes of the microscopical characteristics of these several tissues.

The final issue of these growths is commonly fatal.

There is a slow-growing fibroid in the nose that seems to be limited; these have a narrow pedicle and have a limited blood supply.

The cause of death is by exhaustion from hemorrhage, or mechanical interference with nutrition, or by blood poisoning from ulceration and absorption of septic matter, or by extension to and involvement of or pressure on the brain.

Whenever the nose becomes tightly impacted by a fibroid, spontaneous hemorrhages begin to occur and may become quite frequent and exhausting; ulceration also ensues and septic absorption may follow. Fibroids in the naso-pharynx occur most frequently during adolescence, and are more common in the males.

Causation is doubtful; injuries and local inflammation are supposed to have a causative influence, but rarely can such causes be traced.

There are no early symptoms, and until mechanical disturbance is present none are very marked. When situated primarily in the nose, interference with free nasal respiration is an early and marked symptom; but when situated primarily in the vault of the pharynx, causes loss of resonance and nasal tone of voice.

Dullness of hearing from pressure about the ostium tubæ, and change in expression of face, approaching imbecility in expression in the advanced stage; still later come facial deformities.

Exophthalmos or fullness of one or both cheeks. On examination these tumors are readily recognized by their smooth, glistening appearance and firm texture. The surgical

treatment of these cases is perhaps more difficult than any other surgical procedure from the difficulty of access for inspection and operation. The operation by strangulation, by a ligature, tightened daily, until the tumor drops off, is objectionable as being tedious and not free from septic danger.

The method of removal by cold wire snare is good, as it can be so nicely regulated as to cause little pain and freedom from dangerous hemorrhage. In sessile growths, the tumor must be transfixed by two or more needles, the loop passed over them. The platinum wire engaged around tumor and raised to white heat by cautery-battery is the quickest, that being the only advantage over the cold wire. After bulk of the tumor is removed its point of origin must be destroyed, and for this purpose nothing equals the galvano-cautery, a broad electrode heated to incandescence and well buried in the stump of the tumor at intervals of a few days or weeks, according to thoroughness of such application. Recurrence has been the bane of all former treatment.

It is now the opinion of all surgeons of experience in dealing with these growths, that they should be removed through the natural passages when possible, and only in extreme cases is the surgeon justified in operating from the exterior.

CHRONIC ULCERS.

By EDWIN BENTLEY, M. D., Little Rock, Ark.

Chronic ulcers have long been regarded as the recognized opprobrium of surgery.

They come within the experience of every practitioner, both young and old, and each thinks he has his full share of them. They are at once offensive, intractable, and repulsive, both to patient and attendant.

They may be divided, for the convenience of description and application of remedies, into three more common forms: those dependent on some mechanical obstruction, those dependent on morbid condition of the blood, those which are the sequelæ of some organic disease; all grave conditions, but all may be modified or completely eradicated by judicious and persistent treatment.

The so-called fever sore may be taken as the representative of the mechanical form, beginning as a periostitis unrecognized in its incipency, the following destructive maladies may follow: osteitis, osteo-myelitis, caries, necrosis, gangrene, slough and continued suppuration.

In this form prevention is better than cure, as everywhere else; unfortunately, it is not always made out in the first stage, and the surgeon may be forced to palliative treatment instead of what may appear too heroic to the patient.

The relief of tension, which results in all inflammatory process, is the key to the situation, and in the beginning relieves and prevents the destructive sequelæ.

Illustrating this type, in the short bones, where it has passed into extensive caries, we find the bodies of the vertebræ involved as in Potts's disease; or the head of the femur in hip joint disease, in the long bones. In all of these, the recognition of the malady in the beginning, and the suppression of its ravages, by subduing the inflammatory process, by surgical or mechanical appliances or both, would prevent serious deformities and years of diseased action be aborted. Often after the destructive processes have exhausted themselves, surgical skill is brought into requisition when the best endeavor can be only palliative, due to the extensive loss of structure or disorganization already effected; an inevitable deformity will result.

The second form comprises the old indolent ulcers, which run on for years, varying but little except for special cause. These patients are usually the subjects of irregular habits, crude diet, badly prepared and taken at irregular hours, badly masticated, losing much of its nutritive properties, and often acting as a foreign body in the bowels; bad hygienic surroundings. Under such conditions healthy action of an open surface could not be expected, and added to these conditions, we find ignorant attempts at cleansing, irritating applications, filthy and badly applied dressings. Under such conditions, a raw surface must yield an ichorous and tetid discharge.

Treatment consists in personal hygiene, the tenderest care of the granulating surface, restoration of the normal functions, healthful exercise and surroundings, abstinence from intoxicants, even and well graduated support, gentle applications frequently wet with antiseptic lotions of sufficient strength to be germicidal without irritation, and a certain cure will result.

The third variety results from degeneration of tissue in malignant diseases, of which the scirrhus form of carcinoma is a frequent type. The ulceration of specific origin is seen in the varied manifestations of syphilis; here hygienic measures locally and internal treatment afford the means of healing the malady on the one hand and alleviating on the other.

The point I wish to make is, to remove the cause as far as possible; never neglecting the general system; and abandoning the vague idea that local remedies of themselves possess any healing virtue.

SUPRA-PUBIC CYSTOTOMY WITH REPORT OF A CASE.

By ZAPHNEY ORTO, M. D., Pine Bluff, Ark.

On April 12, saw Chas G——, eleven years old, suffering intensely; pain referred to region of bladder and penis; urine at

times dribbling; at other times passing in gushes, with constant desire to empty bladder. History of case showed he had been treated for past five years for obscure trouble, with symptoms of urinary calculi: examination under an anæsthetic made with steel sound next day for stone, but the stone was not felt. The indication being so strong of calculi, and believing the cure of the cystic trouble would follow the operation, with father's consent, I made the operation next day, assisted by my medical confreres of Pine Bluff, and found and removed a calculus weighing 160 grains. The patient was prepared according to strict antiseptic rules before the operation, and chlorformed; by means of a soft rubber catheter and Davidson's syringe, the bladder washed with Tiersch's solution of

Salicylic acid	℥ i
Boric acid.....	℥ vi
Aquæ dest.....	℥ xl

and about five ounces left in bladder, the fluid being retained by means of a constrictor tied around penis; a rubber bag was next passed into the rectum and filled with about three ounces of fluid to lift bladder well up in the pelvis.

An incision about two and one-half inches was made along the linea alba, just above and extending half inch below the margin of pubic bones, careful dissection made down to conjoined tendon, and a few fibres cut on each side with blunt scissors. The peritoneum was next dissected up and pushed out of way with the fingers. All bleeding was controlled, and the bladder being in full view, two strong silk sutures were passed through the walls, one on either side of the median line, the silk being double and left long enough to extend well over margin of incision, this giving control of bladder.

The incision into the bladder was then made large enough to admit one finger, the stone found and extracted by means of forceps. Slight traction being made on silk ligatures, the bladder was freely irrigated with warm water and Tiersch's solution. A "T" drainage tube was placed in the bladder and wound, dressed with iodoform around the incision, iodoform gauze cut in ribbons and packed into the wound around the drainage tube, same gauze cut and bunched next applied, then sublimate gauze, a layer of borated cotton, next a sheet of rubber tissue, with openings for drainage tube and penis, over this sheets of absorbent cotton, all secured by a roller bandage. The patient was then put in bed and a hypodermic of half grain of morphine administered, he having the opium habit, from its continued use for pain. A long tube was then coupled to the "T" drainage tube, conducting the urine to a vessel on the floor. April 15 the patient was comparatively well, with

temperature 99 deg. F. On the 18th temperature raised to 101 deg.; the wound was dressed this day and bladder freely irrigated with former antiseptic solution; after this day temperature never exceeded 99 deg., becoming and remaining normal on 27th April.

The drainage tube was removed on the fifth day after operation, the urine oozing through the wound and absorbed by the dressing, which was removed every third day. On twelfth day after operation urine passed per urethram in part, and from this time the incision gradually closed; the flow per urethram increased daily until May 1, at which time there was but slight oozing through the wound. On May 5 wound was entirely closed and dressing perfectly dry; on May 9 a slight excess of granulations, which I touched with nitrate of silver; the boy was feeling happy and wanted to go down town. At no time was any pus formed. I neglected to say that silk sutures were removed the fourth day after operation; a few doses of morphia were allowed in overcoming the opium habit. The patient appeared before the State Medical Society on May 16, presented wound healed, and general good appearance.

COMPOUND FRACTURE OF FRONTAL BONE, WITH LOSS OF BRAIN SUBSTANCE.

Reported by G. W. HUDSON, M. D., Camden, Ark.

Patient, aged four years, living seven miles in country, was kicked by a mule eighteen hours previous to my visit; found him lying in bed, partially conscious, with wound two inches by one wide, and depressed wound filled with brain substance and blood.

The long diameter of wound was transverse, and lower margin of fracture just above the supra-orbital ridge and involving frontal sinus. After cleansing wound and chloroforming the boy, I trephined to the right of the frontal sinus and through its walls.

Having antiseptic dressing ready, I raised the fragment of bone with a depressor, requiring considerable force; it came away with a snap, followed by profuse hemorrhage, threatening life of patient, but was controlled by pressure made with absorbent cotton, well bandaged and remaining in place one hour. After the compress was removed, finding hemorrhage controlled, the flaps were carefully adjusted and closed with four or five sutures, then dressed antiseptically; reaction was good.

Three days later wound was dressed, found healthy looking. Dressed again on seventh day, and two sutures removed; light bulging of brain substance was observed. On the eleventh

day was again dressed, and very perceptible hernia cerebri was observed.

On the fifteenth day again dressed, and hernia cerebri had increased to size of hen's egg.

The parents brought child seven miles to my office on horse-back for the next dressing. The brain substance was cut away even with wound surface, and again dressed as before. At the next period for dressing he did not appear, nor was anything more seen of him for two weeks, when, on examination, the wound was found nearly healed, a strong cicatrix having formed and protecting the brain substance. No cerebral symptoms have supervened, and to-day boy is well, in full possession of his mental faculties.

CASE OF ECHINOCOCCUS OR HYDATID CYST OF LIVER.

C. WATKINS, M. D., Little Rock, Ark.

About five years ago I aspirated what was diagnosed as echinococcus of the liver, withdrawing about seventeen ounces of limpid fluid, the tumor disappearing, since which time the patient lived for several years in Washington, D. C. On his return to this city I found, on examination, the cyst had refilled. It was situated in the right hypochondriac region attached to lower border of liver, gave no symptoms except a slight fullness; and but for this uncomfortable condition the patient would not have been disturbed by its presence.

There was slight jaundice, which, with business worries and overwork, affected his general health, and led to his being again aspirated about seven months ago, with same result of disappearance of tumor and same kind of fluid. The operation was successful, and gave some relief. No iodine was injected into the sac, for fear of producing an inflammatory complication. On April 21, last, I was called in to see him; found he had been sick about six weeks, and growing steadily worse; found him sitting in chair, unable to lie down; shallow and rapid breathing, with alarming attacks of dyspnœa, pulse rapid and irregular, and radial impulse out of proportion to the turbulent heart action, which was increased during attacks of dyspnœa.

Upon auscultation I diagnosed endocarditis, marked aortic stenosis, a direct murmur and mitral regurgitant murmur. There was probably pericardial friction sounds, but differentiation from pulmonary friction was impossible. Lower extremities œdematous, skin sallow; the difficult breathing masked all other symptoms; symptoms grew gradually worse, resulting fatally in about four days.

The autopsy showed endocarditis, thickening of aortic

valve with fibrinous deposits, mitral valve thickened, retracted, inflamed, with two well marked atheromatous deposits in one segment of the valve, fibrinous exudate in pericardium, and four ounces of serous effusion; lungs hyperæmic; about half gallon of ascitic fluid in abdominal cavity.

Upon exposing the liver, a cystic bladder-like tumor, about three inches in diameter and ten inches long, full of fluid, was found attached by one extremity to lower border of liver, and was removed by cutting a very narrow slice of liver substance from lower free border.

Opening the cyst, I found the same clear fluid that the two aspirations had yielded, and in addition, one tablespoonful of whitish calculi like gall stones. I immediately examined the gall bladder and found it intact in its proper position.

The liver was healthy in appearance; no stain of bile in sack or fluid contents.

The calculi found had an external, apparently firm lime-like smooth coat, faceted by attrition; were friable, being easily crushed between fingers, containing a dark substance like inspissated bile, which gave the characteristic reaction to the usual bile tests. The fluid contents were not examined either chemically or microscopically.

THE CONTROL POWER OF GALVANIC ELECTRICITY OVER HEMORRHAGE IN UTERINE FIBROIDS AND HYPERPLASIE.

By GEO. F. HYNES, M. D., Fort Smith, Ark.

Of the various surgical measures tried for the control of hemorrhages caused by uterine fibroids, none have been free from danger nor brilliantly successful.

The operation of removal of the uterus and appendages has been justly condemned, having failed in many cases and resulted fatally in others.

Dr. Hamans tabulates five cases of this operation with one death, one not benefited, one fair result, and two cases with good result; that is, the hemorrhage was checked in two cases.

Hysterectomy is more fatal when performed for uterine myo-fibromata than for the other varieties of tumor; one in five dies, and Dr Keith says that ten out of every hundred successful cases in which he removed the uterus or ovaries sooner or later developed insanity.

The ordinary measures known to gynecologists like medical treatment is a waste of valuable time.

Hemorrhage from relaxed conditions, of which the post partum is a type, is known to be amenable to the faradic current; the muscular contraction produced by this form of electricity is not what we want in the type under consideration.

Electrolysis was first proposed by Apostoli, who used it several years, but only published his results some three years ago. Hemorrhage is the danger signal in fibroid tumors, and if we have a treatment which has none of the fatality of hysterectomy or oöphorectomy and at the same time more curative, let us hasten to use it.

The appliances necessary are, first, an instrument to measure dosage, in Fleming's milliampere metre, with Dr. Massey's current controller. We have the means of conveniently handling and measuring the current. You next want a good battery; I use sixty microphone batteries, which give a steady current and prove satisfactory. The electrodes are a smaller one, shaped somewhat like a uterine sound; the part not insulated should be gold or platinum, and an external large dispersing electrode, best made of clay, with thin sheet of lead on outer surface, with connecting wire of copper soldered to it. The technique of the operation is as follows: remove or loosen all superfluous clothing, make parts aseptic, place dispersing electrode with exposed clay surface upon the abdomen, making fast with a binder; connect the wire with the negative pole. The patient then assumes the Sim's position and you introduce the intra-uterine electrode, to which is attached a tinsel cord, which you connect with positive pole of battery.

Your battery should previously be put in connection with the controller and milliamperemetre, and you thus measure and control the number of units actually passing.

The expression of the patient and milliampere metre guide the operator; from thirty to eighty milliamperes are usually necessary, the current continued four to six minutes.

Intermenstrual applications are desirable, but when indicated, should be used regardless of that period, the seances repeated at such intervals as the urgency of case would indicate.

Several cases were reported illustrative of treatment and its good results.

RESECTION OF TIBIA, WITH ORGANIZATION OF BLOOD CLOT.

By DR. M. G. THOMPSON, M. D., Hot Springs, Ark.

I have here a specimen of bone resected from tibia, with subsequent organization of blood clot.

March 1, was called to see young man, aged 25 years, at city hospital; found him emaciated, with a large ulcer, several inches long, indicating dead bone on right leg; history of syphilis of two years' standing. After the usual antiseptic preparation, curetted the ulcer, removing the granulation and pockets of pus, and applied Esmarch's bandage. Dissected

down on tibia, pushing periosteum back, searching for healthy bone; found dead bone from about six inches below knee to ankle joint; divided dead bone from living with chisel and mallet, and elevated the shaft of the bone below the division, leaving little more than head of tibia in the knee joint. Washed the wound well with water sterilized by boiling, and stitched with cat-gut, including periosteum as far as practicable, using no iodoform or bi-chloride solution. Drainage tube in upper part of wound.

I object to a drainage tube at both extremities of wound; where the organization of a blood clot is desired, the clot is always more or less interfered with. Another point of interest is where there is loss of tissue by the process of ulceration. The complete closure of the wound, to prevent escape of the blood required to form clot, is better accomplished by making linear incisions parallel with line of wound on each side, and thus bring the parts in apposition.

On ninth day removed dressing, found perfect union and shape of leg, and in twenty days very good motion at ankle. In conclusion, would advise the effort to organize a clot even under unfavorable circumstances.

ORLEANS PARISH MEDICAL SOCIETY.

A FIERO-MYXOMA OF ANTRUM OF HIGHMORE—OPERATION—RECOVERY.

By P. MICHINARD, M. D., Visiting Surgeon, Charity Hospital,

Mr. President: This case is of interest, not on account of the facility with which the growth was removed, or on account of the rapidity with which the resulting wound healed, but chiefly owing to the mystery in which the nature of the growth was shrouded.

The diagnosis of the nature of tumors, especially of those partly concealed in cavities, is attended with so many difficulties, that to hazard a positive opinion before operation is considered by many as speculative.

Not only in my individual cases, and in those of others in this city, but in such cases treated by men of reputation in the various large cities which I have visited, have I seen a radical change of diagnosis made after the knife had admitted light on the subject. One great trouble is that, in order to arrive at any conclusion as to the character or nature of a tumor, it is frequently necessary to depend on the history which the

patient narrates of the character and behavior of the offending body, a narrative so dependent on the intelligence, memory, and power of observation of the patient that, at times, it becomes a dangerous ally in which to repose much confidence.

I well remember a case on which I was called to perform nephrorraphy, and which offered the history and signs of floating kidney, but which, after section, proved to be a very movable sarcoma of the mesentery. A colon impacted with fæces has been mistaken for malignant growth of the mesentery, and again, for large floating kidney. And as in the case here reported, a fibro-myxoma of the antrum of Highmore was supposed to be an osteo-sarcoma of the superior maxilla.

These errors of diagnosis will still be made and the true nature of the mass remain unrevealed until the knife is called to make what has been termed "an exploration." With this hint as to the advantages of an explorative incision, I will narrate the case, which, of itself, will practically illustrate the benefits to be derived from such incision.

Case.—Female, 61 years of age, applied to ward 36, Charity Hospital, June 15, 1890; stated that fifteen months prior to admission, she first noticed the existence of the growth, which then displayed itself as a very slight tumefaction below the left infra-orbital arch; that it was of slow development, gradually encroaching upon the nostril, until about six months ago, when it apparently became endowed with vigorous activity. Up to this time it caused little or no material inconvenience. It now rapidly increased in size until it attained its present magnitude, causing great deformity. As will be seen, the left nasal cavity is greatly distended and completely filled by the tumor, which also presses against the septum narium to such an extent as completely to obliterate the nasal space of the opposite side, this necessitating breathing through the mouth. The tumor extended inward and backward to the free edge of the soft palate, producing great convexity of the hard and soft palates on both sides. Externally, it seemed to form part and parcel of the left malar bone. In consistence it was hard, firm, and resisting; very little pain produced by pressure; skin over the tumor healthy and not adherent. The finger, introduced as far as was possible, discovered no attachments of the tumor to either the base of the skull or to the palate—a condition which was rather encouraging. The floor of the orbit was pressed upward to a considerable extent, rendering doubtful (when considering the diagnosis made) the healthiness of the eye.

The patient was rather pulled down, while her urine contained albumen. According to her statement, she had applied

to six physicians, none of whom would interfere with the growth.

Assisted by my friend, Dr. R. Matas, I began by making an incision through the middle of the nose, extending it through the lip. Ferguson's line was not adopted, owing to the great extent to which the tumor encroached upon the right side. This incision was met by the usual line extending to the malar bone. The flap was rapidly dissected back, when it was found that the greater portion of the maxilla had become, by pressure, a mere shell. Cutting through this shell with strong scissors, and separating the malar bone from the maxilla with Hey's saw, brought to view an encapsulated tumor, occupying as its bed the greatly distended antrum of Highmore, where, apparently, it had had its origin. The growth was now easily extracted by means of strong vulsella forceps, the few inflammatory adhesions being readily destroyed with an ordinary periosteum retractor.

So simple of removal had this, at first sight, formidable tumor become, that the floor of the orbit and the arch of the alveolar process and the palate were preserved. The attending hemorrhage was slight, probably not more than eight ounces of blood being lost. The cavity was now packed with strips of iodoform gauze, the end of the strips projecting through the nostril, and the wound closed with interrupted sutures of silk boiled in carbolyzed wax, the excess of wax being rubbed off with a carbolyzed sponge. On the fourth day the dressings and sutures were removed, the entire wound having healed by first intention. On the seventh day the patient left the hospital.

The pathologist, to whom the tumor was sent, reported it be a fibro-myxoma. When I consider this case, with its appalling size, rapid growth during the last few months, and general history and appearance of a formidable osteo-sarcoma, I can not help thinking that many such cases with similar conditions and history must be allowed to live and suffer without surgical interference as being "too far advanced to justify operations." And when I consider how little is to be lost and how much, probably, to be gained by the procedure, I feel it would be not more than fair to make an exploratory incision through the face. Should the tumor reveal itself to be sarcomatous and too extensive for complete removal, no harm, in my opinion, will have been done. The wound may be closed with or without having removed a part of the growth. Should the tumor be very vascular, one or both external carotids may be ligated, with the object of diminishing its nourishment, and thus reduce its size.

Should fear of hemorrhage be entertained, I believe in

placing a temporary ligature around the external carotid (or both), the small wound closed, and the knot tied when necessary.

Unless the tumors were too firmly and too extensively adherent to the base of the skull I would not refuse to make at least an exploratory incision; by that I mean a clear dissection of the face.

The mortality following excision of the superior maxilla is comparatively small—smaller than the generality of the profession may be inclined to believe.

Dr. Jos. D. Bryant, of New York, in the May, 1890, number of the *Annals of Surgery*, informs us that the death rate in 230 cases is 12 per cent only. Again, ligation of the external carotid is not dangerous. In the same article on excision of the superior maxilla, Dr. Bryant says: "Up to the present time this vessel has been ligatured no less than eighty-five times (eight of which are my own), and in no instance, so far as I am informed, has death or dangerous secondary hemorrhage followed as the direct result of the ligature, and in but one, my own, can death be positively ascribed to this operation alone."

The length of the incision necessarily made for the exploration is greatly minimized in its severity by the present methods of aseptic and antiseptic surgery.

SCIENTIFIC PROCEEDINGS OF THE RICHMOND ACADEMY OF MEDICINE AND SURGERY.

A PECULIAR CASE OF INDIGESTION.

At the meeting of June 10, Dr. J. N. Upshur reported a peculiar case of indigestion in a lady of 54 years, very much "run down" from mental and physical overwork.

The peculiar feature was a severe pain, spasmodic in character, occurring periodically about every ten days. Its seat was about the pylorus and downward and to right along the edge of the ribs. When the doctor first saw her she had three of these attacks at intervals of about twelve hours. The first he relieved in a few hours with morphia and atropia hypodermically—the two last with 1-50 grain doses of nitro-glycerine—administered twice for second, and only once for third attack. No eructation of gas and water followed the last of the three, as had been the case always before. The general treatment given was a slight nutritious diet, attention to bowels, and a tonic of phosphate of iron, quinine and strychnine.

She had no recurrence of the pain; nitro-glycerine had been suggested to the doctor's mind by the fact that the pain in its acuteness resembled the spasm of angina pectoris.

He had much confidence in nitro-glycerine for the relief of the œdema, dyspnœa and cardiac distress of Bright's disease.

Had tried it with much success for the temporary relief of aggravated sciatica. Though slower in action, its effects were more permanent than those of nitrite of amyl.

Meeting of June 14.

A SEQUELA OF LA GRIPPE.

Dr. W. W. Parker reported the case of a robust young man afflicted with influenza a short time ago, this being accompanied by an inflammation and considerable swelling of the muscles of the neck, and this, in time, followed by a frightful eruption of vesicular character over the whole body, very much like chicken pox.

It was particularly marked upon the hips and inner side of thighs, where it resembled and might have been mistaken for confluent small pox.

Continued ten days or two weeks, leaving extremities first and gradually; no fever; very slight constitutional disturbance of any kind; no itching of consequence.

SINGULAR EXPERIENCE WITH SCARLET FEVER AND MEASLES.

Dr. Grey (Wm. B.) reported in reference to two children affected with scarlatina (aged respectively 2 and 4 years), that just about the commencement of desquamation the older one developed the eruption of measles. In four or five days, the younger did the same.

Furthermore, said the doctor, about this time the father, an old man, took scarlet fever.

HÆMATOMA AURIS.

Dr. Chas. M. Shields reported a case of hæmatoma auris occurring in a lawyer of about 60 years of age, and perfectly sound in mind (the trouble very rarely appearing except in the insane).

About a month before the appearance of the growth, the man had suddenly lost consciousness one day, and in falling had bruised the side of his face corresponding to the trouble. The doctor enlarged an opening found upon anterior wall of canal about half an inch from external orifice.

The cavity into which it led would hold about 5 or 6 drams. The discharge was *very* offensive. Prescribed a

wash of peroxide of hydrogen from one Saturday night until following evening. The patient had five or six hemorrhages, losing in all about twenty or thirty ounces of blood.

The only resource for perfect control of the flow was packing the cavity with cotton saturated in Monsel's solution. The doctor thought the man would recover, but with a considerable scar.

Dr. M. D. Hoge reported the case of a man who, since an attack of lagrippe, had fallen into a state of melancholia, almost amounting to insanity. He suffered excessively from nervousness and an intense pain in the head, the latter being treated successively with morphia, cocaine, and bromide potassium. He still complained of great pain in his head, until one night he pounded himself over the head with a poker until he had peeled off a large piece of scalp, and produced enormous hemorrhage. He then felt better. Some time after the doctor found a sequestrum of bone (a portion of the external table) in the wound, which he removed, and the part began to heal beautifully.

The man was very much depressed all along; believed himself going crazy, Complained of hearing voices. The doctor reasoned him out of that state, and pronounced him now upon the road to recovery.

Dr. W. W. Parker thought the hearing of voices a pretty sure sign of insanity. J. W. HENSON, M. D., *Reporter*.

CORRESPONDENCE.

VIENNA LETTER.

ON ARTIFICIAL BLEEDING.

Prof. Sacharjin, in a recent number of the *International Klinische Rundschau*, breaks a lance for artificial bleeding which, during recent years, has almost fallen into disrepute. Prof. Sacharjin used artificial bleeding as an evacuating and as a derivative measure. As to the first, he availed himself of it in disturbances of the blood-circulation of the brain as well as in the case of cerebral apoplexy as the result of atheroma, and in such cases he evacuated from 175 to 350 grams of blood; he proceeded in the same way in the case of chronic nephritis and hypertrophy of the left ventricle of the heart. Furthermore, Prof. Sacharjin used this method when he had to deal with disturbances of blood-circulation of the thoracic organs, as they were occasionally met with in the diseases of the left venous cardiac

orifice as well as in the first stages of croupous pneumonia. In local bleeding, Prof. Sacharjin used cupping glasses and leeches for the purpose of depleting the blood vessels, in the following cases: first, in acute pleuro-pneumonia and pleurisy; second, in acute nephritis; third, acute inflammation of the large nerve trunks, particularly the sciatic nerve. In all these cases he preferred cupping-glasses, and most frequently applied about six cups; seldom only four and occasionally also eight. The chief indications were pains and acute onset of the symptoms, provided that the general health of the patient was not too much impaired; fourth, in antiphlogistic treatment of the abdomen, and usually in circumscribed peritonitis, he used from six to ten leeches, as the abdomen was not quite appropriate for the application of cupping-glasses.

As to the derivative influence of artificial bleeding, Prof. Sacharjin introduces this chapter with some remarks on "hæmorrhoids," viz., a complex of symptoms which he considers as a disease by itself, and which is characterized by a periodical occurrence of morbid symptoms about the head, the back, the chest and the body; these attacks occurred and disappeared spontaneously, etc., also hemorrhages from the nose and the anus. These attacks occurred three or four times a year, and were due to a peculiarity of the organism favored by various other conditions, such as alcoholism, immoderate horse-back exercise, etc. The relief which was obtained from artificial bleeding in such cases induced the author to try to obtain good results by this method in other similar disturbances.

The indications for derivative artificial bleeding are: cerebral hyperæmia and its consequent condition (uneasy sleep, giddiness, etc.); hyperæmia of the spinal cord and inflammation of hemorhoidal tumors.

The results thus obtained were good.

ON THE INITIAL SYMPTOMS OF TABES DORSALIS.

Prof. Kahler, of Vienna, director of the second clinic for internal medicine in the Vienna General Hospital, made a very valuable contribution to the knowledge of tabes dorsalis in a paper read before the Vienna Medical Society. The author first deals with the anatomico-pathological conditions in this disease. Charcot and Westphal, the lecturer pointed out, had established the fact that changes of the so-called degenerative neuritis were to be found in the case of tabes dorsalis in sensory nerves as well as in mixed ones. In such cases we have to deal with an increase of the continual degeneration of nerve fibers, which, according to the investigations of S. Mayer, was present in the normal peripheral nerves. In the

healthy organism this degeneration was compensated by a constant continual regeneration, but under pathological conditions the degeneration preponderated, and disturbances of function in the innervation territory of the affected nerves were thus produced. From previous investigations of Prof. Kahler it became evident that a degenerated nerve fiber in the posterior columns and posterior funiculi of the spinal cord did not undergo regeneration even under the most favorable conditions, and this fact well explained the constant conditions of degeneration of the posterior funiculi in the case of tabes. Besides these nerve fibers other nerves and regions of the central nervous system could become affected in the course of tabes, and this explained the polymorphism of the symptoms of tabes.

As to the initial symptoms of tabes, Professor Kahler first mentioned the cerebral symptoms. Fainting fits which occurred in otherwise quite healthy and robust persons were always "suspect," and the same was true of giddiness and apoplectic attacks—after the latter even symptoms of a localized disease ("Herdsymptome") could remain behind. Even sporadic epileptiform attacks could occur as initial symptoms. Professor Kahler occasionally also observed attacks of migraine, which later on passed into gastric crises, which were then followed by manifest symptoms of tabes.

Among the sensory organs, the progressive tabic atrophy of the optic nerve played the chief part. It could precede the outbreak of further tabetic symptoms for twenty years or so.

As to the differential diagnosis between intoxication-amblyopia, we had to bear in mind that in the last the conditions were symmetrical on both sides, whereas in tabetic atrophy of the optic nerve one eye preceded the other. In numerous cases color blindness was observed and the power of sight also became impaired; the central scotomata so frequently observed in intoxication-amblyopia, however, were lacking. The course of the atrophy was, in general, slow. Initial symptoms of tabes affecting the olfactory nerve were rare; they were, however, more frequent in the auditory nerve. In the latter case, the symptoms consisted in subjective sensations of noise, and later on passed into absolute deafness.

The anatomical examination proved the presence in one case, of degenerative neuritis of the auditory nerve, and in another, degeneration of the so-called deep root in its medullary course. Paralysis of the muscles of the eye were frequently observed in the beginning of tabes.

A symptom which was characteristic of tabes, and which was occasionally observed at an early date, was the isolated want of reaction of the pupils, though they could be closed by conveyance

and accommodation; this symptom was first described by Argyll-Robertson. Also symptoms on the part of the pupil nerves were met with as initial symptoms of tabes dorsalis.

As to the anatomical basis for these conditions, a degeneration of the ascending or sensory root of the fifth nerve in the medulla oblongata was described by Westphal. The early decay of the teeth was due to the same cause as the anæsthesia of the fifth nerve.

As a rare initial symptom of tabes dorsalis, also, paralysis of the facial nerve could be mentioned. The participation of the vagus, the accessory nerve, and the glossopharyngeal was of a very great importance. This became manifested by the occurrence of paralyses of the muscles of the larynx, disturbances of deglutition, increased frequency of the pulsations, and attacks similar to angina pectoris. The symptoms of the tabes in the innervation territory of the spinal nerves were more frequently observed than the cerebral initial symptoms. Among the trophic disturbances, "herpes zoster" was the most remarkable one. The neurotic character of this ulcerous process was generally recognized since the investigations of Duplay and Morat. Arthropathias and algias as well as gastric symptoms were proportionately frequently observed.

RESECTION OF THE EXTERNAL BRANCH OF THE NERVUS ACCESSORIUS WILLISII.

In a recent number of the Polish journal, *Gazeter Lekarska*, Dr. Jassinski reports upon the case under consideration.

In 1886, Dr. Schwartz, of Paris, described a case of extension and resection of the spinal accessory nerve for spasmodic torticollis. The authors had also operated on three such cases. In one case, a girl, aged twenty years, considerable relief occurred after extension of this nerve, though the spasmodic torticollis had already persisted for two years. In the case of a woman, aged 35 years, who had suffered from spasms of the sterno-mastoid and the trapezius muscles, two centimeters of the nerve were resected, when perfect relief came on. In a third case, he had to deal with a man who was suffering from bilateral, continual and painful chronic spasms for three years.

After the section of both the sterno-mastoid muscles (myotomy), spasms of the trapezius and the left sterno-mastoid muscles came on. After this the author resected three centimeters from the external branch of the left nervus Willisii; both the muscles became paralytic, and in the course of three weeks atrophic. The excised pieces of nerves presented no pathological changes. Dr. Jassinski drew the following conclusions: 1. Section of the external branch

of nervus Willisii did not completely suppress the functional activity of the sterno-mastoid and trapezius muscles. 2. But rapid atrophy of these muscles came on. 3. These muscles were replaced by other muscles which were supplied by the plexus cervicalis, and the head did not lose its equilibrium. 4. After bilateral resection of this nerve no change in phonation, etc. was observed. 5. Though this operation was no radical one, it nevertheless was attended with temporary relief of the insupportable disease. 6. The technique of operation was not attended with more severe results than the disease itself. The operation was, therefore, to be preferred to the injection of morphine.

CODEIN AS A NARCOTIC.

Dr. G. Kobler, of Vienna, has tried codein in the clinic of Prof. Von Schrötter. He used codein in the case of pulmonary and laryngeal phthisis. The drug was administered to twenty patients in doses of from 0.03 to 0.04 grammes pro dosis, and from 0.1 to 0.15 pro die. It was given in pill-form powders, mixtures, and suppositories. In most cases codein was better borne than morphine. It also differed from the latter in that it never caused constipation, and facilitated expectoration in bronchitis. Dr. Kobler, besides the above mentioned cases, also recommended codein in those cases in which morphine was not well borne, and in which it was attended by nausea and vomiting.

TENTH INTERNATIONAL MEDICAL CONGRESS AT BERLIN.

All our professors and many other physicians are now leaving Vienna to attend the International Congress at Berlin. You will receive full details about the congress from me, as I am now about to set out for Berlin.

ADDITIONAL NEW AIDS IN ANASTOMOSIS: ROBINSON'S "OX HIDE" AND "SEGMENTED RUBBER PLATES."

Messrs. Editors: After my lengthy communication on the "Present Status of the Operation of Anastomosis," etc., in your last issue, I regret again to encroach upon your valuable space with a letter on the same subject. What I will add, however, will tend only to confirm the impression that the interest generally felt in surgical circles on the subject of the aided methods of enterorrhaphy continues unabated, and that efforts in the way of simplifying the "aids" and rendering them more accessible are constantly being suggested and offered to public criticism.

The latest device in the way of a ready substitute for the Senn decalcified bone plate comes to us from Toledo, Ohio, and to Prof.

F. B. Robinson, of the faculty of the Toledo Medical College, is due the credit of the suggestion. I am indebted to the courtesy of Prof. Robinson himself for the journals containing his very interesting and valuable contribution, and which had appeared or had been received too late to avail myself of them in the publication of my paper.

In the first paper on the "Technique of Intestinal Surgery" (*Cleveland Medical Gazette*, May, 1890), Dr. Robinson states: "We will now describe the material which we consider the safest, most suitable and also easily accessible yet given the profession. I have never seen a recorded experiment with them except my own. I have now given them a long and crucial test, and would prefer to trust them over any other plate. To make these *rawhide* plates, take the green hide of an ox and simply shave off the hair. Then cut the plates two and one-half inches long and one inch wide. Perforate the plate by a diamond-shaped hole one-half by three-quarter inches. Now attach to this plate six linen sutures armed with six milliner's needles and it is ready for use. These plates, of course, are soft and will not give fixation as well as stiff plates. A still better plan is to shave the hair from a green ox hide and then dry it. This will shrink, thicken and stiffen the hide, from which the best plates in the world can be made."

The segmented rubber plate is thus described in a later paper on intestinal anastomosis (*Toledo Medical Compend*, August, 1890): "It is the combination of a ring of catgut, (rawhide or sheepskin) fastened to a plate made of two pieces of rubber. The ring is stitched to the plate by two catgut sutures and the two rubber segments making the plate are held together by a suture of catgut at each end. The plate and ring are thus held together by catguts. The claim I make for this plate is that it is easily accessible, it is suitably absorbable, in fact, so delicately adapted to the work of anastomosis that it can be made to suit the character of the secretions in any locality of the alimentary canal. It coopts the largest possible serous surface and holds in continuous approximation as long as desired the walls of the intestines."

Dr. Robinson has now performed over 136 experiments on dogs, in the course of which he has repeatedly tried both the rawhide plate and his latest suggestion, the segmented rubber plate.

While I have not yet had an opportunity of testing these plates experimentally, I am satisfied that Dr. Robinson's ingenuity has supplied us with two more aids which are very practical and decidedly worthy of remembrance by operating surgeons. For experimental work they are at once welcome, since they can be prepared much

more readily and economically than the decalcified bone plates. From the clinical standpoint, I can not regard either as *preferable* to the Senn plate, though as *succedanea*, they should rank first in the list, especially the segmented rubber plate, since these meet the indications more perfectly than any of the aids thus far offered and described in my previous paper.

The ox-hide plate, ingenious as it is, is the inferior of the two "aids" suggested by Dr. Robinson. The fatal objection against it being its too ready digestibility, if I may be permitted such an expression. In its power to resist the more active gastro-intestinal secretions, it is not much better than catgut, and for this reason alone it must be relegated to the category of the ephemeral supports which simply aid the surgeon in the more rapid application of the Lembert stitches. The segmented rubber plate can with more reason be regarded as a rival of the Senn plate, since it meets all the indications of the decalcified bone plate and possesses almost an equal resistance to the destructive action of the digestive juices. It is *physiologically* inferior to the bone plate, however, because the latter is *wholly* absorbable and disintegrates uniformly when properly decalcified; and furthermore, the rubber plate is more complicated, since it consists of different parts, and is less elegant than the bone plates. The real objection to the bone plate is that it is tedious and troublesome to prepare and too expensive to buy ready made. In these respects only are the segmented rubber plates of Dr. Robinson the superior of the Senn plate. In experimental work this means a great deal, and if only from the standpoint of these advantages, this plate is destined to receive a hearty welcome everywhere.

I have modified Dr. Robinson's segmented rubber plate by substituting my solid catgut ring for his ring of ox hide which supports the plate; this modification is not one of great moment, though I think, it adds to the solidity as well as appearance of the plate.

In connection with this subject, I would avail myself of this opportunity to add the name of Dr. Shively, of the staff of the Presbyterian Hospital, New York, who was mentioned by Dr. Briddon at a discussion in the New York Surgical Society, October 23, 1889, as having experimented with chromicized gelatine as a substitute for catgut rings. "It could be moulded into any shape and could thus be placed in accurate position." This is the only account that I have read of this suggestion, and therefore simply record it in order to complete the history of the "aids" that have been recommended in the performance of enterorrhaphy since the publication of Senn's paper.

With the addition of Shively's gelatine discs and Robinson's

two new plates, the list of aids is now swelled to ten substitutes for the decalcified bone, all of which have been suggested in the United States in the course of the last eighteen months. Surely no better proof of the interest of American surgeons in the modern developments of intestinal surgery could be desired than this.

Finally, I desired to correct an important omission in my list of references in my last paper, by adding the name of Dr. F. Kammerer, of New York, who, at the meeting of the New York Surgical Society, October 23, 1889, reported two cases of gastro-enterostomy performed with the aid of Abbe's catgut rings. In these cases, end-to-end anastomosis was performed; both were unfavorable and extreme cases and the operations ended unfortunately, one dying on the fourth day of peritonitis, the other on the second, of shock. Dr. Kammerer in a personal letter informs me that another experience with Abbe's rings in ileo-colostomy has not changed the opinion expressed by him at the aforesaid meeting of the Surgical Society, in which he expressed a preference for Senn's plates in future operations.

Thanking you for your kind indulgence, I am, dear sirs,

Very respectfully, RUDOLPH MATAS, M. D.,

72 South Rampart street.

SELECTED ARTICLE.

KOCHER ON THE TREATMENT OF OLD DISLOCATIONS IN THE SHOULDER JOINT.

Abstracted from the *Deutsche Zeitschrift für Chirurgie*, April, 1890, by F. W. PARHAM, M. D.,
New Orleans, La.

Since Professor Theodor Kocher, of Bern, is one of the best authorities on this subject, and has devised the most admirable method of reducing certain forms of shoulder dislocation, it will no doubt prove interesting to have his views on this subject, and his own description of the manipulations which he practices.

"Old dislocations," says he, "come under our observation in no joint so frequently as in the shoulder joint." The main reason is, as statistics show, that more than half of all dislocations are those of the shoulder. Some special reasons, he thinks, are:

1. This injury arises relatively frequently from a rather moderate degree of violence. In twenty-four cases of old dislocation reported by him, by far the greater number resulted from a fall or blow on the outside of the shoulder. In consequence of this there was only moderate damage done the tissues. The swelling might be rather inconsiderable, as likewise the suffering. In some cases, too, the disturbance of function might be slight, where the occupation did not make great demand upon the movements of the joint.

"The patient, therefore, finds it often unnecessary to consult a physician, or the physician, in view of the slight appearance of damage, does not consider it necessary to make a thorough examination. At all events he can with existing luxation resume his work, as a rule, however, only such work as does not tax severely the movements of the joint." The arm can only be moved by means of the scapula and can not be raised higher than the horizontal plane; rotation is greatly limited, although passive movements are freely made, if no adhesions exist.

2. The physician may be deceived, after manipulations, into thinking he has replaced the bone, when he has not really done so.

3. Some physicians, too, still maintain the exploded view that there are recent shoulder luxations which cannot be reduced. "This is by no means the case," says Kocher; "only a proper method is needed to replace *every* shoulder dislocation, and it requires only a careful examination to assure one of the success of an attempt to reduce." He refers, of course, to recent dislocations.

4. Errors in judgment may also be caused by the circumstance that the axis of the arm comes after a time to deviate less from the normal direction than shortly after the injury, the elbow stands less away from the side, and the arm in some cases hangs almost in contact with the chest. This deviation in the position of the arm depends upon the stretching of the at first tense capsule and ligaments, especially the coracohumeral and its processes. Hence, in old luxations, differences in length are more apt to be found than in the recent, even two, three and five cm. being observed in cases.

The diagnosis of an old dislocation is, as a rule, easier to make than that of a recent one, for obvious reasons. Extravasation and swelling of soft parts have nearly disappeared, a certain degree of atrophy permits one to ascertain more easily the position and shape of the bones, and the diminished tenderness makes examination by palpation more searching. Inspection is often, indeed, conclusive, since the outer surface of the deltoid falls quite straight downward, the edge of the acromion projects sharply under the skin, and its hinder corner and the lateral edge of the scapular crest are prominently seen from a distance. In the subcoracoid variety, too, which is the most frequent of overlooked luxations, the rounded head is distinctly seen under the process. Old axillary dislocations are rarer, since they are less likely to be overlooked, owing to more violent trauma, the clearness of the symptoms and the greater disturbance of function.

The disturbances of function, which cause the patient, often only after long lapse of time, to seek the advice of a physician, have reference in the majority of cases to the movements of the arm, or in other words, the usefulness of the arm in respect of all those functions, in the performance of which the shoulder joint itself is brought into action. Kocher refers to one case, that of a man who consulted him for a dislocation suffered four years previously.

The man had contented himself with cold applications for eight days, and had then gone about his work, which was that of bricklayer's assistant. His shoulder movements were made by means of the scapula. Abduction was scarcely 45 deg. and rotation was almost nothing.

One of the chief questions in determining the method of reduction of old dislocations is the cause of the increased obstacles to reduction. These have been shown by numerous autopsies, and more recent researches of Krönlein demonstrate that the essential obstructions are on the one hand new socket formation, and on the other hand obliteration of the old glenoid fossa. There are also adhesions of the head in its new situation with formation after a time of a joint capsule.

Adhesions of the capsule to the bottom of this fossa, but especially to the rim of the old one, give rise to special dif-

difficulties in reduction. The resistance is by these changes increased in a double way: first, because greater force is required to dislodge the head from its new situation; and, second, because the space in the old fossa is very much limited, owing to the narrowing of the rent in the capsule, shortening and induration of the capsule, as well as fibrous filling up of the old joint cavity.

He describes the pathological examination of a six months old luxation in a patient dead of carcinomatous struma.

“The anterior circumference of deltoid greatly thinned, atrophic. Search in the space between deltoid and pectoralis major discovers the head of humerus covered with firm connective tissue, under the coracoid process. On the median portion of circumference, the short head of biceps and the coraco-brachialis could be seen coursing down, raised up and expanded. After separation of these muscles and the pectoralis minor, the head of humerus was seen completely surrounded by a firm capsule-like fibrous envelope. The bicipital groove and biceps tendon preserve their normal relations. The capsule-like covering of the head passed without interruption over the glenoid fossa. The edge of the coraco-acromial ligament rises prominently. Above the upper circumference of the fossa, pass the thick but pale muscular bundles of the supraspinatus, and beneath the fossa the infraspinatus, down to the greater tuberosity. The teres minor and biceps up to the groove show normal relations.

“The portion of capsule running over the glenoid fossa is relaxed. Nerves and vessels are still somewhat separated from the head. No tearing of subscapular muscle is observed. This last covers the whole forward circumference of the head of the shoulder. On further dissection no capsular rent is anywhere discovered. The head is quite movable downward, inward and outward to the distance of one or two centimetres. Near the anterior circumference of the old fossa, on the front surface of the scapula, is found a new formed fossa, from the edge of which outward stretches a closed fibrous envelope. The circumflex vessels and axillary nerve are rather firmly bound down to the under edge of the new fossa. The new capsule consists of firm connective tissue, its inner surface being richly beset with villous-like masses.

“ The cartilaginous covering of the new joint-cavity, as well as that of the humeral head, shows changes like those of proliferating arthritis, such as irregular elevations and nodules, in some places defects, and on the edge considerable hypertrophies. From the greater tuberosity a piece of bone two centimetres long projects into the supraspinatus muscle. The capsule is loose, the contents clear synovia. Of this old articulating surface only about one-half can be seen preserved, the postero-superior portion. To the greater portion of its surface the thickened capsule is firmly united. The remaining pathological observations, which we make, belong generally to the severest cases, in which no replacement is shown to be possible.” His table gives the more detailed description of each case, and a résumé merely of the pathologico-anatomical findings of eight cases is given in the text.

From this collection of eight cases, with autopsies, where no replacement without cutting was possible, it is learned that, with a single exception, the cases were complicated with fracture, chiefly of the tuberosities. This fracture was either a simple tearing away of the tuberosity, so that the cartilage-covered head and the shaft still preserved their continuity, or that the whole mass of the process was at the same time torn out in the form of a wedge, giving the impression of a combination of separation of the tuberosity and fracture of the anatomical neck, or that of a double fracture, where the lines of fracture passed through the anatomical neck on the one hand or beneath the tuberosities on the other hand, running together toward the median line under the head. That with such a combination of dislocation with complete solution of continuity between head and shaft, the usual reduction method, after long duration of the trouble, must fail, goes without saying. But even in the case of simple tearing away of the tuberosities the difficulties proved to be the same, as well as in the case of fracture through the base of the great tuberosity or through the anatomical neck. Either this had taken place, and the shape of the head was so changed by the union in false position that it could no longer find room in the joint cavity or could not be brought through the rent in the capsule; or, as more frequently occurred, the fragment had totally failed to unite, but had given rise to

firm, partly bony, hypertrophy of the capsule, which led to a diminution of the capsular space, as well through narrowing of the original capsular rent as through shrinking and stiffening of the yet intact portions of the capsule; exceptionally, the fracture of the forward rim of the articular surface had led to hypertrophy of the bone even into the capsule, and this obstruction would nevertheless have to be overcome, before replacement could be effected.

The fixing of the head in its new place appears accordingly to play by no means so great a role as the alteration, according to his observations, of the old articulating surface and the old capsule, although it is obvious that with the formation of a new joint of its own, no replacement of the head can be accomplished. Kocher has, however, only seen this in the form of a direct continuation of the old capsule, especially with fracture of the anterior circumference of the glenoid fossa.

In only one of his luxations, irreducible after ten months, was there not complication with fracture. In this case the obstruction consisted simply in shrinking and binding down of the capsule in the circumference of the rent, and in connection therewith the interposition of the still preserved portions of the front capsular wall. But the shrinkings, ossifications and adhesions of the old capsule form so significant obstacles to reduction, that Kocher declares: "There is among all our cases of this kind, not one case in which operation would have disclosed conditions which would have led one to expect success by means of an ever so rational method of reduction without cutting operation; there are in other words cases of old dislocations in which every procedure, not operative in character, is completely out of the question, so far as reposition is concerned."

Regarding the methods hitherto and now chiefly employed for the replacement of old reducible dislocations, Kocher remarks that they all involve the use of rude force, calculated to break up the adhesions of the head in its new place. It is clear that neither in the case of formation of a new joint nor where there is deformity resulting from the union of fragments in false position as well as in the case of peculiar fractures,

can one accomplish reduction. If, therefore, these rough methods have in many instances led to success, this is not to be attributed so much to the presumed tearing of adhesions between head and surrounding parts as to tearing up of the old capsule and capsular remains, particularly in the neighborhood of the capsular rent. That for the attainment, however, of this kind of result, the simple, forcible pull outward or upward is a procedure which may injure as well as help, needs no argument, since not only is the thickened and cicatricial, and even sometimes ossified, capsule torn, but all kinds of secondary injuries, such as nerve and vessel ruptures, may be brought about. Reference to the compilation of Körte* and Stimson† is sufficient to show the frequency of damage to vessels and constant dangers to life.

Polaillon's method of subcutaneous cutting of the capsule and fibrous adhesions appears far more conservative, but one must admit that these subcutaneous incisions, even in the hand of a practised surgeon are not free from danger, since it is impossible to fully appreciate the anatomical relations.

Decidedly safer appears the method of making a free incision, for then one can best secure himself against injury of nerves, vessels and other tissues. On the other hand, however, it is of the greatest importance to carry out the suggestions of Polaillon, to the extent that one contents himself with the cutting of adhesions and makes no attempt at replacement until the wound is completely healed.

With primary healing this is usually accomplished in eight to ten days. In this operation, the objection is not so much to exposing the head of the bone, but to making room in the cavity by opening and splitting of the capsule. The broad incision has the advantage of deterring one from further attempts at the reduction in cases of complication with fracture, where such reduction is clearly out of the question. One then has the alternative of enlarging the operation of simple incision to one of resection, when this is deemed advisable, or of leaving the case *in statu quo*. Although, according to Bardenheuer, the number of these resections is not small, nevertheless there is

*Archiv für Klin. Chir. Bd. XXVII.

†Annals of Surgery, Vol. II, No. II, 1885.

lacking a definite knowledge of final results of the operation. Resections can not be recommended as a routine procedure nor can it be considered desirable for a large number of cases. Ollier, at the French Surgical Congress of 1886, reported a case, in which resection gave him a satisfactory final result; indeed, his case is one of the most beautiful known to us. Leaving out of view, however, the fatal cases, we can not regard the operation as giving as a rule far better results than a simple orthopedic treatment of unreduced luxations, for patients learn to make use of finger, hand, and elbow joints, and can make quite forcible movements of the arm by means of the shoulder girdle. Even in the beautiful resection case of Ollier, when the arm could, thirteen months after the luxation, be raised above the horizontal plane, this elevation could only be accomplished by means of a forward and outward, not directly outward, movement and the shoulder blade moved simultaneously.

Kocher would limit resection to those cases where in the course of months, in spite of orthopedic gymnastic management, the movement either did not improve or became less free, and to those cases where the patients came to suffer severely from pressure on vessels, and especially on nerves.

But even the bloody method of reduction without resection gives by no means good results. O. Knapp* finds of twelve cases reported there were two deaths, and only four cases materially improved, whilst of twenty resections there were four deaths and sixteen good, some, indeed, very good results. Certainly resection is a less damaging proceeding than the "bloody replacement," as up to the present time practised.

This "bloody replacement" ought only to be done when there are no complications apparent, when one can, by some well-managed incisions through the tense and shrunken old capsule, lay free the old articular surface.

It is evident, then, how much to be desired it must be to possess a method for old luxations which shall be free from the necessity of employing great force, thus endangering life and function, as well as one which shall give better results than the generally only partially successful "bloody method."

* Bruns's Beiträge, Bd. IV.

Kocher believes that in his "ROTATION-ELEVATION METHOD" he has a method which will answer all reasonable demands. In the first place as to result: "Of twenty-eight cases of old luxations we have restored by our method twenty-five cases, and of these five were over four months old." The method was described by him in the *Berliner Klin. Wochenschrift* in 1870. "It has, however, not been rightly understood by various authors and has not obtained the recognition it really deserves." Many have, however, understood it, and he has a series of letters from colleagues* who have succeeded with this method after they had failed by all other methods.

Thus, Dr. W. V. Muralt writes that in a six weeks old subcoracoid luxation, after one hour's struggle by other methods, assisted by six strong men, with failure, by means of the "ROTATION-ELEVATION" method he reduced it with the greatest ease (*spielend*).

Dr. Geipel, of Zwickau, writes that he was quite delighted with the method, succeeding in four cases (almost with "mathematical certainty").

Chisholm,† six cases; Ch. J. Jersey‡ twenty-one, seventeen at first attempt; Dr. W. Körte, a two months old and a three months old luxation, in the latter after failure of the most various methods; Kaufmann § succeeded at second attempt in one seventy-one days old under chloroform; and in fourteen fresh cases without narcosis.

Charles A. Power || gives an imposing recommendation of the method: Of 129 subcoracoid dislocations in Chambers Street hospital, ninety-eight reduced at first attempt, six at second, eight at third, and one at fourth attempt, all without narcosis, total 113; six reduced under ether; in three cases method not tried, and in seven other methods were employed after failure under ether with Kocher's method.

With the aid of the cuts, the following description of Kocher's will be easily understood:

"The abducted elbow is slowly, but with force, *pressed to the side*, in order, during the then succeeding rotation, to

*Ceppi. *Revue de Chirurgie*. 1878 and 1882.

†*Lancet*, April, 1833.

‡*New York Medical Journal*, September, 1883.

§*Centralblatt für Chirurgie*, March 30, 1881.

||*Medical Record*, New York, March, 1881.

keep the head of the humerus well against the front edge of the glenoid fossa. In order to get a surer hold for the rotation, it is suggested to bring the elbow somewhat *backward* and to make it approach as nearly as possible the middle line *behind* the body somewhat more liberally than is represented in Fig. 2. Now follows *outward rotation* of the arm, the forearm being *flexed at a right angle* at elbow, operator holding on at the elbow with one hand and with the other at the wrist joint. This movement also is to be carried out quite slowly, with gradual overcoming of resistance, until the forearm points directly toward the side. If, during this manœuvre, the deltoid does not show prominently at the top of the shoulder, it is advisable to assist the outward movement of the head of the humerus by means of leverage over a compress under the arm. The suggestion of Carafi, to wait about one minute at the end of outward rotation, is entirely to be commended. We had often made use of this plan before the above-mentioned author's publication; by gradual relief of the tension, the outward rotation can frequently be still somewhat increased. We can give our approval also to the proposal of Jersey, to practise a pull downward on the arm during the two first steps in the manipulation, for in this way the stretch of the upper capsular wall, which we wish to make use of, is very conveniently intensified and the rotation of the bone around the pivotal point on the front edge of the glenoid fossa thereby made sure.

“Now comes the third manipulation. Whilst one maintains unchanged the outward rotation of the arm, the elbow is carried quite slowly but powerfully straight forward in the vertical plane of the body as high upward as it can be done, remitting gradually the outward rotation so as at last to carry the hand to the chest surface of the other side; in other words, the upper arm is to be rotated inward. (Fig. 4.) At no time should a single sudden or backward movement be made, but each one of the movements must by all means be carried out with a certain amount of force until the movement is completed; for herein consists the greater difficulty of old as compared with fresh dislocations, later adhesions in the former requiring to be torn up, which can not be done without a certain expenditure of force. How comparatively safely this procedure can be carried out, is shown in the circumstance that we were able to

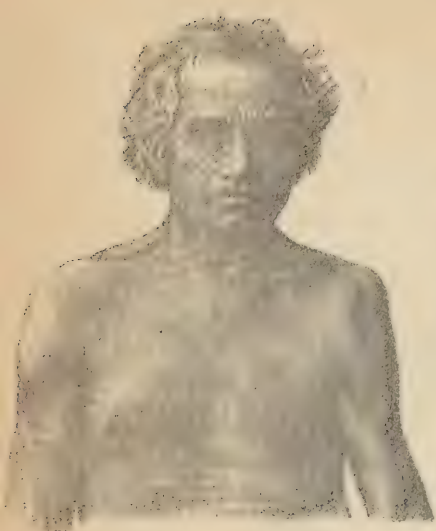


Fig. 1.



Fig. 2.



Fig. 3.

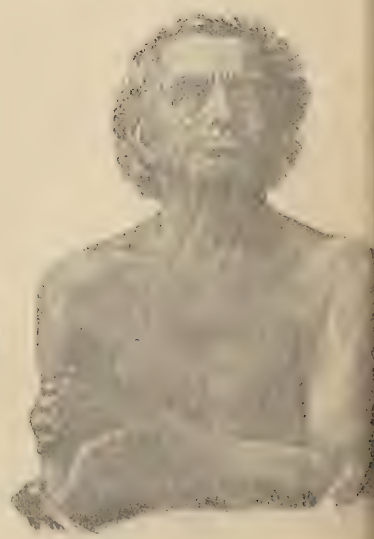


Fig. 4.

photograph the accompanying illustrations during the process of reduction of a (of course, fresh) dislocation (see Figs. 1 to 4).

When we question the results of this ROTATION-ELEVATION method for old dislocations, it is to be remarked that it may appear astonishing that this method shows better results than other customary methods, which would seem to be more effective. There are of non-operative methods two chief ones in use: (1) The simple traction with use of pulleys where necessary, in order to break up the adhesion, and (2) the so-called circumduction, where by carrying the arm about in all possible directions the adhesions are said to be loosened or broken up.

We can quite omit the comparison with the first, as a very damaging, dangerous one; for even if one regards the tearing out of an arm as an exceptional mishap, nevertheless this simple, powerful traction, has too often, as Kärte and Stimson have shown, caused severe complications, especially injuries of the vessels. There should, therefore, be no talk of longer holding on to this method. If, however, circumduction does not prove effective in the breaking up of abnormal adhesions, this shows quite plainly that the resistance, which replacement of old luxations meets with, is not to be ascribed to adhesions varying at pleasure from case to case, but to the existence of a particular kind of adhesions in a definite place.

We have based the recommendation of this proceeding upon the demonstration that a ligamentous apparatus belonging to the upper portion of the capsule plays the chief role in the fixation of the head in its false position in the same manner as Bigelow has shown for the Y-ligament at the hip.

This ligament has had much too little attention from anatomists, and has been in part insufficiently described. The ligamentum coraco-humerale, which arises from the lateral edge of the coracoid process as far as the uppermost edge of the glenoid, sends very strong fibers to both tuberosities, some into the front capsular wall, partly also into the posterior. If one lifts out the biceps tendon, he can see as a rule quite distinctly from the inner capsular surface outward, how, besides the groove which this tendon forms in the upper capsule wall, a

posterior and a front band runs down toward the greater and lesser tuberosities. The posterior coalesces with the tendon of the supraspinatus, the anterior, however, passes on down, tense, to the lesser tuberosity. Crossing its origin and above it at the upper corner of the glenoid, arises another band, which is described and pictured in text-books as running obliquely forward and outward into the capsule and going down in front of the anatomical neck. This band forms with the front leg of the above mentioned coraco-humeral ligament the chief strengthening of the upper capsule wall and it is this ligament which is stretched in dislocations, bandlike and tense forward, and is not torn in subcoracoid dislocation (Kocher gives an illustration of this apparatus). In the neighborhood of this especially tense ligament-apparatus are specially formed those adhesive hypertrophies, which narrow the capsular rent, reduce the lumen of the capsule and attach the head firmly to the front edge of the fossa. It is, therefore, easily understood that any proceeding which is intended to effect replacement first by proper lifting up of the upper capsule wall from the fossa, and thereby opening of the capsular rent and relaxing of that portion of the capsule, must also be best calculated to accomplish the requisite stretching and tearing of the adhesions immediately connected with this ligamentous apparatus.

“We would again,” remarks Kocher, “direct attention to our operative cases to justify the assertion that there are by no means indifferently located adhesions between the head of humerus and the scapula which stand in the way of reposition, but that the most important adhesions are present in the neighborhood of the old capsule rent between the glenoid edge and the anatomical neck.”

These close the rent and interfere with the lifting up of the capsule from the fossa, thus preventing the head from entering the cavity.

Kocher, of course, admits that there are cases of complicating fracture, etc., where this ROTATION-ELEVATION method will fail, but in the large majority of cases, as shown by his statistics, success will crown the surgeon's efforts.

He then calls attention to a mishap which sometimes

attends the manipulation. "It has happened three times to us that during the attempt at forcible outward rotation the upper arm has broken. This can be looked for in every case where the adhesions offer greater resistance than the bone can stand. One will have to think of the possibility of such an injury in old and frail people. The method has no other evil consequences." This fracture is not always, either, a misfortune, for it may well take the place of resection in some cases. Indeed, the head may be exposed and intentionally broken in the joint. In one case he broke the anatomical neck, but leaving it where it was, replaced the shaft. In the third of these mishaps the bone broke in the middle of the shaft, but healed readily in plaster in four weeks.

"However, admit," says Kocher, "that this mishap has been oftener observed, still it has to do with an injury, which in no way leaves behind permanent damage, and on this account can not be brought into comparison with the severe complications, like vessel and nerve ruptures, which are relatively so frequently observed with the other procedures for reducing old luxations." In sixteen of his twenty-five cases of old luxation he operated without narcosis, a proof that in most cases an anæsthetic may be dispensed with. "When one reflects," says he, "that according to Bardenheuer's statement of 134 fatal chloroform cases, which Marchand has collected, not less than eleven were cases of reduction of shoulder dislocations, one is not likely to undervalue the possession of a method which enables him to dispense with anæsthesia. This is quite especially true of recent dislocations. As the results of Jersey, Power, and my own show, it is an exception when one does not succeed without narcosis." Of course, anæsthesia has advantages, which are obvious, but as the cases require no haste patients can be prepared for the narcosis.

For cases where one does not dare to use sufficient force and does not succeed with the ROTATION-ELEVATION method, Kocher recommends a modification of Cooper's method, consisting in the placing of the heel in the axilla and making a pull with strong outward rotation of the arm and then elevating the arm gradually forward in the vertical plane, the traction being maintained. This is a combination of the Cooper and Kocher's methods.

EDITORIAL ARTICLES.

THE RATIONAL TREATMENT OF TETANUS.

In an exact science, results from a given combination of circumstances can be unfailingly predicted. Here we have to deal with factors of known and definite force. The simpler the factors, the easier it is to predict the resultant of the action of a number of these factors; but the difficulty increases with the number and complexity of the various forces or bodies with which we have to deal. This difficulty is well illustrated in the human body, the structure and functions of which are so varied and wonderful. The simplest of the bodily functions are attended by the exercise of complex chemical and vital forces, which to be fully understood must be studied in connection with the other functions.

In dealing with such a highly organized structure as the human body our calculations, as might be expected, are frequently far from the truth. In the treatment of diseases the difficulties that face us become greater as the pathology is more obscure. It is true that we had a remedy for malaria long before Laveran discovered his *plasmodium malariae*; empiricism has given us much good advice, but empiricism must ever remain what it is. Working in the dark is always unsatisfactory, and without some general principles of pathology and therapeutics to guide us, we can hardly hope to make any lasting progress.

In treating a disease *rationally* we are but applying knowingly certain remedial forces to overcome or arrest certain known diseased conditions. In the history of medicine many theories have been advanced to explain morbid phenomena. Each age smiled at the crudities of the views of medical writers who had passed away, and then constructed its own theories, only to be smiled at in turn.

The diseases of the nervous were the most obscure, on account of their very varied character and the difficulty of tracing a set of symptoms to the proper lesion. Experimental physiology, which has done so much good to men and so much harm to animals, has cleared up a vast amount of what was formerly impenetrable mystery; but the work is not yet com-

plete, for there are many problems connected with the nervous system which still await solution.

Among the diseases of the nervous system tetanus possesses a great interest. A slight scratch, which would ordinarily heal quickly and attract little attention, may serve as a starting point for a disease which is almost invariably fatal. The apparently arbitrary way that tetanus shows in selecting its victims only increases its terror. A violent railway injury may heal and leave no trace, but the wound of a rusty nail may usher in convulsions that end in death.

Up to a comparatively recent time, our knowledge of the pathology of tetanus was *nil*. Treatment was entirely symptomatic, and thanks to a good constitution and a mild attack, patients sometimes survived both the disease and the treatment. Among the remedies used, of course, the antispasmodics held first rank. But even these did not strike at the root of the trouble; they merely allayed the most marked of all the effects of the action of some morbid matter.

The investigations of Nicolaïer, Kitasato, Th. Kitt, and others have, we believe, clearly shown that tetanus is caused by a definite bacillus (*bacillus tetani*). The germ-nature of the disease had long been suspected; but the suspicion did not enable the therapeusis of tetanus to make any marked advances. The investigation of Th. Kitt, of Munich, have, however, completed the chain of evidence required to enable physicians to combat the formidable disease successfully. [Kitt's investigations are given in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, April, 1890, page 713.] The two immensely practical points which Kitt enables us to infer are: First, the bacillus of tetanus does not wander listlessly over the whole human body, but remains confined to a very small area around its point of entrance, and from this focus it does all its mischief. Second, the convulsive symptoms are due to the ptomaines elaborated by the bacilli. The convulsions can be produced at will by injecting solutions of these ptomaines into healthy animals, unaccompanied by bacilli.

A dead bacillus is incapable of doing any harm. If, then, the germs remain confined to a small space around the point of entry, why not attack the intruder and destroy him? That

is what ought to be done, undoubtedly. But can it be done, and how? If we refer again to the pages of this journal (June, 1890, page 937), we shall see that it has been done—empirically, it is true, but the result could not have been more gratifying if it had been obtained after laborious thought. The treatment of Dr. F. Pavlini is strictly in accord with the most recent teachings of pathology. The hypodermic injection of carbolized water at various points around the original wound is sure to cover the area occupied by the bacilli. Any germicide would doubtless answer as well as carbolic acid. The point is, to destroy the bacilli. When these are dead they no longer generate ptomaines. The ptomaines that are circulating in the blood at the time that the bacilli are destroyed will continue to produce convulsive symptoms until they are eliminated; and if the strength of the patient be not too greatly drained he will be able to bear the action of the remnant of the ptomaines, and will pull through.

In this connection it would be interesting to note a case treated by Dr. Loeber, of this city, who was assisted by Dr. Joachim. A young man about 20 years old acquired tetanus from an injury of the foot, due to stepping on a rusty nail. When the tetanus developed, the wound had already healed. The general treatment employed was the administration of the usual anti-spasmodics, while the local treatment consisted in reopening the wound and applying strong carbolized solutions, and the repeated application of Venice turpentine.

It was noticed that the tissues underneath the scar were discolored, of a dirty sero-purulent appearance. This patient made a recovery.

With the lights before us, it now seems that it is a comparatively easy matter to destroy the invading germs, and that the surgeon will not have performed all of his duty unless he has made an attempt to kill, with some germicide, the true cause of the disease.

THE NON-UNION OF PHTHISIS.

Koch's discovery of the bacillus tuberculosis, in 1882, marked a great era in the history of phthisis. Although the specific character of certain affections of the lungs had been

surmised centuries before the time of Koch, still the absolute demonstration of a living organism in tubercle was not made until Koch showed the way. When his discovery was announced, the medical world at once hoped that it was the key to the solution of the great problem of curing consumption. When we reflect that about five million persons annually fall victims to tuberculosis in its various forms, we will have no trouble in conceiving the vast importance of any advance in our knowledge of the intimate pathology of this dread disease. Eight years have passed since Koch gave his discovery to the world; but what real progress has been made in the treatment of tuberculosis as a result of our knowledge of the bacillus? None—unless the guarded utterances of Koch at the recently adjourned Tenth International Medical Congress can be regarded as an indication of the discovery of a new method of attacking the dreaded foe.

All treatises on tuberculosis published prior to 1882 at once became ancient history upon the discovery of Koch's bacillus. The bacillus of tuberculosis cleared up many things that before had been shrouded in uncertainty; and when the bacillus was found in any tissue, it was not necessary to seek further for any explanation of morbid changes. All tubercles were of one kind.

There were two investigators, however, who felt that the bacillus of Koch was being invoked to explain too many things. They were Dr. Heneage Gibbes, Professor of Pathology in the University of Michigan, and Dr. E. L. Shurly, Professor of Laryngology and Clinical Medicine in the Detroit College of Medicine. These gentlemen have jointly published a series of papers in the *American Journal of the Medical Sciences*; and from the nature of their conclusions, these articles are bound to attract considerable attention from reflecting medical men.

The former work of Gibbes in tuberculosis has stamped him as an accurate and trustworthy experimenter and observer. There can be no doubt of his ability to recognize tubercle bacilli, for few men are as well qualified to speak on this subject as Gibbes. Therefore, when a man of his standing makes statements that run counter to the beliefs held by all intelligent medical men, the inquiring mind seeks to know what

were the imperfect parts in the basis of his creed which led to erroneous deductions.

In their joint contributions, Gibbes investigated the pathological aspect of the subject, while Shurly dwelt on the clinical features. The experimental studies of Gibbes were numerous and various. It is impossible to give here even an outline of his vast work. When carefully examined his investigations led to the conclusion that several distinct conditions were currently grouped under the term "phthisis pulmonalis."

In summing up the results of their labors up to the present time, Drs. Gibbes and Shurley state that they consider that tuberculosis and phthisis pulmonalis can not be classed as the same disease clinically; and that the appearances presented by the pulmonary lesions post mortem are so different in these diseases that they are even more widely separated pathologically than clinically,

The position held by the adherents of the bacillary is essentially this: that tuberculosis, phthisis pulmonalis, lupus, bovine tuberculosis, and scrofula, have one thing in common—namely, the bacillus tuberculosis, which is the essential morbid agent; and the several conditions above mentioned are but variations in the course of the baneful activity of the specific organism. The observations of Gibbes and Shurly have led them to doubt whether all these clinical conditions do meet on common ground. Instead of the present method of classifying diseases of the lungs attended with consolidation, the authors suggest the following classification:

ACUTE MILIARY TUBERCULOSIS.—Of two kinds, differing clinically only in the occurrence in one kind of typhoid symptoms, causing it often to be mistaken for enteric fever, but differing entirely from each other histologically, the one form being genuine tubercle, the other a collection of numerous small foci of inflammatory action. They differ also in the distribution of Koch's bacilli, which in the latter form are always found in large numbers, but in the former are often absent and never numerous.

GENERAL TUBERCULOSIS.—The clinical features vary according to the chronicity of the disease, but sufficient to a careful observer to distinguish it from phthisis pulmonalis, and

never following broncho-pneumonia. Differing in its morbid histology, in that the consolidation is always formed by new growth and not by inflammatory action, this new growth being characterized by its proneness to break down and disintegrate, thus forming cavities; enough of the new growth, however, always being left in the wall of the cavity to determine its tuberculous character. It differs also from phthisis pulmonalis in that many cases, even with large cavities, have been proved to be free from tubercle-bacilli.

PHTHISIS PULMONALIS.—An inflammatory disease of the lungs distinguished by rapid consolidation, which, however, may clear up if the process has not gone far enough to damage irretrievably the lung substance, and notable for the frequency with which it follows broncho-pneumonia. Differing from tuberculosis in that there is no formation whatever of new tissue; from beginning to end the process is one of inflammatory exudation, breaking down, or caseation, ending in the formation of cavities. Differing also from tuberculosis in the regularity with which tubercle-bacilli are found in this disease and their enormous numbers in the most acute forms.

CHRONIC OR FIBROID PHTHISIS.—This is due to a hyperplasia of the fibrous or interstitial tissue of the lungs.

The authors state that the above classification is that of the older writers, which has been set aside by the discovery of Koch's tubercle-bacillus; and they "contend that this discovery is not sufficient, and can not sustain the sweeping change that has recently been made in the views of many regarding these lung diseases."

The reasons that led Gibbes and Shurly to deny the leading rôle to the bacilli, may be briefly summed up as follows: "1. The relation of the tubercle-bacilli to much of what is clinically and anatomically called tubercle in man, is not fully established, (Dr. Pye-Smith). 2. In regard to size, the bacillus of human tuberculosis is different from that of bovine tuberculosis, although the behavior to staining reagents is the same. In staining properties it is not distinguishable from the bacillus of leprosy, or from numerous bacilli found in birds and other animals. 3. Cases have been seen by Gibbes and Shurly in which tubercles were found that contained no bacilli; Koch,

himself has recorded such cases. 4. The disease produced by inoculation in the lower animals has no features similar either to reticular tubercle or caseous phthisis.

“We have, then, a micro-organism which is considered by many to be firmly established at the virus of a disease, to establish which connection its discoverer has laid down a set of rigid laws, and we find that this micro-organism does not fill the conditions of any one of these laws. It may be asked how has this micro-organism arrived at this anomalous position? The answer is simple. This solution of the tubercular problem took a vivid hold on the imagination of many men, the majority of whom had no special training for histological or pathological work. It was carried by acclamation, and any questioning of its position was received as little short of blasphemy. Even at the present day there are some men who seem to consider it a personal insult to them to doubt the infallibility of the tubercle-bacillus. We have, however, been working for a number of years on this question, and we wish to bring before the medical profession our views founded on actual practical work. * * * We can not help thinking that the chemical side of the question has been almost entirely neglected. What have the chemists told us about caseation; of what is it composed; and is it in all cases an identical chemical substance? This is a most important question, and one that ought to be fully worked out. It would then be shown whether the substance produced by the disintegration of reticular tubercular formation is identical with that found after the breaking down of consolidation following broncho-pneumonia. It is nonsense to assert that these are the same, and that they are caused by a specific micro-organism; we want chemical proof.”

The very positive stand taken by these investigators in opposition to the claims set up for Koch's bacillus is destined to work a great change in the opinions now almost universally held. The progress made in the treatment of tubercular diseases has been so small as to be ridiculously out of proportion to the possibilities offered by a knowledge of the supposed essential morbid agent. There must be a hiatus somewhere; and, as bacterial morphology seems almost to have reached its utmost limits, we must turn our eyes to the chemistry of the

morbid products for a solution of the many difficulties that beset the path of the conscientious physician. It will not do to group several affections under one name, and treat them haphazard; they should be carefully distinguished, and then our treatment can be intelligently directed. The microscope has done much; but it would seem as though the final touches were to be given by the aid of chemistry. In that direction should the energies of future investigators be bent.

YELLOW FEVER AND QUARANTINE.

A case of yellow fever developed at the United States quarantine station on Chandeleur Island, Miss., July 30, 1890, on board the British bark *Chippewa*, which was forty-three days on the voyage from Rio de Janeiro to Chandeleur Island. Dr. H. R. Carter, in his report to the Surgeon General, M. H. S. (*Weekly Abstract of Sanitary Reports*, August 15, 1890), states that the vessel finished disinfection on July 28 (she arrived on July 15), and it can hardly be doubted that the patient contracted the disease while cleaning the hold on July 27, or overhauling the dunnage on July 28. The vessel was clean on arrival, but in the (rock) ballast there was an unpleasantly large amount of fine granite dust. When the case of yellow fever developed, the vessel was again subjected to thorough disinfection.

Commenting on this case and another that developed on the *Curlew* on July 27, 1890, Dr. Carter says:

“(These cases).....beautifully illustrated two points: 1. The danger that may lie in vessels with no sickness upon or before arrival, the dunnage, ballast or cargo being infected, and disease contracted only when this is disturbed. Neither vessel had any sickness in Rio, en route, or on arrival. 2. The futility of counting quarantine detention from any date save the *completion of disinfection, i. e.,* last exposure to possible infection.

“On the sixty-eighth day from Rio, the fifteenth from arrival in quarantine limits, this (last) case developed, and had detention been counted from either of these dates, as she (the

vessel) had been disinfected, it had developed ashore. Counting from completion of disinfection, it developed after one and a half days of quarantine.”

We reproduce the above because it very forcibly confirms the position taken by Dr. C. P. Wilkinson, late president of the State Board of Health of Louisiana. Dr. Wilkinson set forth his views very fully in a paper published in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, December, 1889. In the course of his service as assistant quarantine physician, Dr. Wilkinson had splendid opportunities of observing the apparent vagaries of yellow fever in quarantined vessels.

Dr. Wilkinson narrowed the period of incubation of yellow fever down to *two days*. Dr. Carter's case developed in a *day and a half*. If the germs do not multiply in that time and develop an attack of yellow fever, they are destroyed and eliminated, for the normal fluids of the system are all endowed with germicidal power, and the contest for mastery is decided in favor of one or the other combatants in forty-eight hours. The logical conclusion from Dr. Wilkinson's premises, that quarantine against yellow fever could *safely* be reduced to *three days*, is too great a stride for our people to grasp as yet; the reduction to five days, which is still in vogue, aroused great alarm, and caused many protests to be sent in—especially from rival seaports. The five days' detention is now a matter of course, and the experience of several years has shown that, with our unexcelled disinfecting appliances, it is as safe as a detention of twenty or forty days. A long and profitless term of detention at quarantine was scarcely less an obstruction to the commerce of New Orleans than the sand-bars which existed at the mouths of the Mississippi river before the construction of the jetties in South Pass.

For many years foreign commerce tried to gain entrance into New Orleans all the year round, but our now discarded quarantine methods effectually prevented such a consummation. Much of the carrying trade that properly belonged to our city was literally driven to other ports. Such had become official custom, and to such were our people patiently resigned. But a man with convictions, brains, and energy swept aside the cobwebs that clouded the vision of our lawmakers and busi-

ness men, and Dr. Joseph Holt instituted what is now universally known as the "Holt System of Maritime Sanitation." When he proposed to substitute thorough *maritime sanitation* for prolonged detention, and reduce the latter to five days, he almost precipitated a revolution; but he carried his point, and we still live and prosper. The good work inaugurated by him has been intelligently continued by his successors in the office of the president of the State Board of Health. Drs. Wilkinson and Olliphant have both improved upon the plans laid by Dr. Holt. (A description of the present fumigating and disinfecting appliances may be found in our issue of July, 1890.)

The machinery has, perhaps, been carried to as great a degree of perfection as may be attained. The next step will be to reduce the period of detention to three days; but it will require a long "educational campaign" among the people before such a step can be taken, and the man to propose it must not fear a revolution.

CORRECTION OF TYPE.

On page 47 of our July number, in the report of the Richmond Academy of Medicine and Surgery, Dr. Edwards spoke of furred tongue and constipated bowels as distinguishing *typho-malarial* fever, instead of what he was misrepresented as saying.

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

MEDICINE.

MENINGITIS AND PERITONITIS FROM PNEUMOCOCCI WITHOUT PNEUMONIA.

Debove reports the case of a man of 54 years, who presented himself with the symptoms of cerebral excitation, similar to those of alcoholic delirium. The symptoms of peritonitis then developed, and the patient died in three days. The autopsy showed a general purulent peritonitis with a purulent infiltration of the meninges. The other organs were entirely normal. The pus was of a creamy consistence, green color, and considerable tenacity—the microscopic characters of the

pus of pneumococci. Bacteriological examination revealed pneumococci in the pus from both localities. The author speaks of the difficulty in determining the etiology of the double localization. It would seem most probable that it was a general infection of the organism by the pneumococci, which had settled in the meninges and peritoneum, but had spared the lungs.—*La Tribune Medicale. American Journal of the Medical Sciences.*

THE PROPORTIONS OF THE CHIEF PROTEIDS OCCURRING IN THE URINE IN VARIOUS FORMS OF ALBUMINURIA.

In the *British Medical Journal*, July 26, 1890, appears a very interesting paper on the above subject by Dr. D. Noel Paton, of Edinburgh, based on experiments made by John Douglas, M. B., and Ronald Mackenzie, M. B.

The clinical importance of albumen in the urine has long been admitted, but it is only within recent years that the value of a more careful study of these albumens has been recognized. This is not a matter of surprise, because until within the last few years the chemistry of the blood-plasma, from which the albumen of the urine must ultimately be derived, was practically uninvestigated. Before the researches of Hammerstein, the value of the work was diminished by the imperfect methods employed in the separation of the proteids of the plasma and serum. It is to him we owe the introduction of the method of separating the two great proteids of the plasma and serum, namely, serum-albumen and serum-globulin, by the precipitation of the latter with sulphate of magnesium. By this method he showed that the amount of serum-globulin is much larger than was formerly supposed, and he maintained that neither by the passage of a stream of carbonic acid gas nor by dialyzing of the salts of the serum, so as to precipitate the globulin on the dialyzer, could all of this proteid be obtained.

Although Burchardt challenged the accuracy of his methods, and maintains that not merely globulin but also some other proteid is precipitated, his results have been tully confirmed by his own more recent experiments, and by Kauder, who, using sulphate of ammonia, obtained results precisely similar to those of Hammerstein with sulphate of magnesium. He showed that a certain strength of sulphate of ammonia, 26 per cent., will precipitate the globulin, and that if the strength be gradually increased, no further precipitate is produced until the strength of the solution approaches concentration, when the serum-albumen is also thrown down. By this fractional method he was able to separate these two proteids.

The possible importance from a clinical point of view of the chemical examination of the proteids of the urine, was recognized by Senator, in 1874. His method of observation was by no means satisfactory, depending, as it did, upon the separation of the serum-globulin by diluting the urine and passing through it a stream of carbonic acid. But from these observations he was able to conclude that, "in every urine which contains coagulable albumen, (para) globulin may be detected as well as serum-albumen, and the amount of this is not dependent only upon the total amount of proteids, but may differ according to the different states of the diseased kidney. So far as the few observations allow a conclusion to be drawn, it appears that amyloid degeneration may be distinguished from chronic renal disease by the richness of the urine in para-globulin." The researches of the British investigators do not bear out this last statement of Senator.

Maguire, using a more satisfactory method for the separation of the para-globulin, namely, by means of sulphate of magnesium, and determining the amount of each proteid by the dilution method—a not altogether satisfactory process—concludes from a few observations that in functional albuminuria the globulin is in excess of the serum-albumen, while in granular kidney the reverse is the case. In one case of albuminuria of pregnancy para-globulin was the only proteid present.

The researches of Douglas and Mackenzie have extended over two years. We can not reproduce entire their tables and experiments, but they arrived at the following conclusions:

1. Senator was right in the conclusion that in all cases of albuminuria, both of the chief proteids of the blood-plasma are present.

2. The proportions of serum-albumen and serum-globulin may vary within wide limits, the quotient of the amount of serum-albumen divided by the amount of serum-globulin being sometimes as low as 0.6, sometimes as high even as 39.

3. In acute nephritis, when blood is absent from the urine, the quotient is high. When hemoglobin is present, the globulin is, of course, in excess.

4. As the disease becomes more chronic, the quotient sinks, and in the terminal stages of the disease may sink as low as 0.6. This alteration depends upon the condition of the patient rather than upon the state of the kidney, and is probably related to a similar change in the blood-plasma.

5. Amyloid disease can not be distinguished from the ordinary forms of chronic nephritis by the high proportion of serum-globulin, as was formerly maintained by Senator.

6. Maguire's suggestions that the functional albuminuria

is characterized by the high proportion of serum-globulin is not correct.

7. In every case the proportion of the proteids to each other varies much during the course of the day, and in comparing the proportion of these proteids in different cases it is necessary to examine specimens of the mixed urine of the twenty-four hours, and to take into account the nature of the diet.

8. The proportion of serum-globulin is always highest during the night. It falls greatly after breakfast, when it reaches its lowest point in the twenty-four hours. In most cases it again rises in the evening. The precise connection of the alteration in this proportion with the taking of food can not be considered as definitely settled.

9. Milk diet, as observed by Lecorché and Telamon, has a peculiar effect in increasing the proportion of serum-albumen.

10. The amount of proteids passed appears to bear a tolerably direct proportion to the amount of proteids taken, and excluding milk diet, the increase of the proteids in the urine on a diet rich in these substances appears to be chiefly due to an increase in the serum-albumen.

11. The variations in the proportion of the albumen to the globulin in the urine is frequently so great that we can hardly believe that it is connected with a similar change in the plasma. The few experiments we have performed would suggest that a high pressure favors the transudation of serum-albumen, while a low pressure increases the proportion of globulin transuded.

The same number of the *British Medical Journal* contains, among other reports to the British Medical Association, the report of the Scientific Grants Committee, of which Joseph Lister is chairman. In this report, mention is made of the investigations of Dr. R. Kirk on the *proteids of the urine and albuminuria*. Dr. Kirk, in a paper previously published (*Lancet*, April 26, 1890), showed that the mucin of the urine is precipitated by heat, and that it occurs in increased quantity in numerous cases of albuminuria. Dr. Kirk is now engaged in investigating the relative proportion of these two substances in albuminuria. Dr. Kirk believes, with Dr. Ralfe, that the immediate source of the albumen in a great many cases is the renal epithelium. Dr. Kirk, in a forthcoming report, expects to show that mucin, when in large excess, impairs the accuracy of the cold picric acid test for albumen, which may only produce a slight opalescence when nitric acid gives a dense albumen zone. Dr. Kirk will point out that a sufficient quantity of mucin gives a hemi-albumose reaction with heat and acid, and this has

been observed in the urine of measles and pregnancy. Dr. Kirk rejects the view that *para-globulin occurs in the urine apart from albumen*, this error having arisen from ignorance of the behavior of mucin. (This is in direct opposition of the statement of Maguire, given above. It is evident that a great many more observations will have to be made before the exact chemistry and pathology of albuminuria can be cleared up.)

THE PREVENTION OF URETHRAL FEVER.

Dr. C. G. Buchanan Klophele contributes a valuable paper on urethral fever to the *Therapeutic Gazette*, March 15, 1890, and in the prophylaxis of the disease lays stress upon the following points:

1. In operations for the relief and cure of chronic retention of urine, the complete evacuation of the urine at first should not be permitted, but rather the withdrawal of only a few ounces, and the immediate injection of a solution of boric acid or other mild antiseptic, in volume equal to one-half the quantity of urine withdrawn, lessening with each succeeding injection the quantity of fluid thrown in, and increasing the amount of urine withdrawn. As a result, we have less shock, if, indeed, any; no suppression of urine; no hemorrhage from the urinary organs; and slight, if any, so-called urine fever.

2. Tight strictures of the membranous urethra are more successfully, and hence more safely, dealt with by perineal section. When associated with strictures of the pendulous urethra, the combination of internal and external urethrotomy is undoubtedly the best treatment.

3. The decomposition of blood, urine, and other organic matter in the bladder or urethra, may give rise to the phenomena of urethral fever through the production of ptomaines; hence the necessity for antiseptic treatment, generally and locally.

4. The disease is more common among those who are predisposed to it by a peculiar nervous temperament.

5. In view of the fact that more or less shock attends all urethral operations, especially the forcible and rapid dilatation of old stricture with sounds; and as sudden death has followed even the gentle insertion of a sound, the caliber of which was less than that of the stricture, it is hence important that all practicable antiseptic precautions should be observed in every case of dilatation of a urethral stricture or strictures, with a view to avoiding, so far as possible, such effects, which are more likely to

follow the rapid dilatation of old strictures when not preceded by internal urethrotomy.

6. It is also important to ascertain the condition of the bladder, urine, and kidneys before operating for stricture of any degree, and when these two organs are found extensively diseased, the greatest skill, gentleness, and patience are necessarily called for in the treatment of strictures. Further, when these organs are diseased, and we have to deal, in a given case, with several strictures of very small caliber of the pendulous urethra, two courses compatible with safety are presented, viz.: gradual dilatation alone, or internal and external urethrotomy, leaving a few days between the internal and external operation, the latter being done first.

7. Quinine, in any quantity, exerts no manifest influence over the course of urethral fever.

8. Boric acid, internally, by its resolvent and antiseptic action, doubtless does exert a favorable influence upon the disease, and will prove a prophylactic if given some days before operating.

9. With a further view to prophylaxis, both before and after all operations upon the urethra—even simple catheterism—the canal should be injected with some mild antiseptic. This is more essential after each act of micturition subsequent to internal urethrotomy.

10. When urine fever persists despite all treatment, or should it, after any operative interference with the urethra, jeopardize the patient's life, perineal section should certainly be done.—*Medical News.*

DERMATOLOGY AND HYGIENE.

CHRYSOPHANIC ACID IN ACNE.

Dr. Metcalf highly recommends this agent in acne. He says he has not failed to cure perfectly any case in which the treatment has been adopted. The face is to be washed with soap and well dried, at night. Before retiring, the parts in which the acne is are to be well rubbed with an ointment of three grains of the acid to the ounce of vaseline, and this is repeated nightly until a sharp inflammation of the skin ensues. The inunction is then omitted till the dermatitis is gone, when it is repeated. In most cases a three-grain ointment is of sufficient strength, but occasionally the strength is to be increased up to five grains to the ounce, or even more. The patients are to be cautioned about the staining of their fingers and clothes and to guard their eyes.—*Kansas City Medical Record.*

TREATMENT OF DANDRUFF.

Dr. H. Laird Pearson (Birkenhead) writes to the *British Medical Journal*: Personal experience enables me to recommend the following:

℞ Hydrarg. perchlor.....	7 ss.
Glycerine	3 v.
Eau de cologne.....	3 v.
Aq.....	3 xx.
℥. Ft. Lotio No. 1.	
℞ Beta-naphthol.....	3 ij.
Alcohol. (ethylic).....	3 xx.
℥. Ft. Lotio No. 2.	
℞ Acid. salicyl.....	3 ij.
Tr. benzoin co.....	3 iss.
Ol. Olivæ.....	3 x.
℥. Ft. applicatio.	

Wash the head thoroughly with terrebene soap ; rinse well, and dry with a rough towel ; rub in some of the No. 1 lotion, and dry with towel ; next apply lotion No. 2, and allow it to evaporate off ; finally rub in thoroughly a small quantity of the oily application. The treatment should be carried out daily for a month, and then every alternate day for a fortnight. The dandruff disappears in a few days, and the hair becomes vigorous and supple in a remarkably short time.

GYNÆCOLOGY.

VAGINISMUS TREATED WITH THE CONSTANT CURRENT.

DR. LOMER, in *Centralblatt für Gynäkologie*.

The galvanic current has recently been used successfully in pruritus vulvæ ; Lomer reports two cases of vaginismus in which the constant current had a happy effect. In one case the affection had lasted for five years, and had rendered coitus impossible ; every attempt gave rise to distressing pain and spasm of the ostium. She had taken all the usual remedies, without obtaining any relief. Upon inspection, the introitus appeared normal. The spasm of the perineal musculature was characteristic ; it appeared spontaneously, without contact. During narcosis, three fingers could be passed into the vagina ; an examination of the genitals revealed no other abnormality. The current was applied thus : the cathode, a large quadrangular electrode, fifteen centimeters long by seven centimeters wide, was applied to the abdomen ; the anode, a small, round electrode, was applied to the perineum and introitus. The current was at first as strong as the patient could stand it, and it was administered every other day for four or five minutes. Later

on, it was given at longer intervals. At first spasmodic contractions occurred; then the ostium would bear touching, and finally allowed the passage of two fingers without pain. Coitus was now permitted, and it was painless.

The treatment lasted for six weeks, and definite cure was obtained in four months. The second case was similar; the good result, however, was obtained in a shorter time. In both cases, the trouble arose from dysmennorrhœa; and even this seemed to be relieved by the electricity.—*Hospitals-Tidende*.

BOOK REVIEWS AND NOTICES.

The Principles and Practice of Surgery. By John Ashurst, Jr., M. D. Fifth edition; enlarged and revised. Philadelphia: Lea Brothers & Co., 1889. New Orleans: Armand Hawkins. Price, sheep, \$7.

A Treatise on Surgery: Its Principles and Practice. By T. Holmes, M. A., Cantab. Consulting Surgeon to St. George's Hospital. Fifth edition; Edited by T. Pickering Pick. Philadelphia: Lea Brothers & Co. New Orleans: Armand Hawkins. Sheep, \$7.

These books need no elaborate criticism. They are both good books.

In reviewing a previous edition we highly commended the work of Ashurst to the student and practitioner as a text book, We can heartily repeat that commendation. The student, we believe, could not get a better book for obtaining a comprehensive knowledge of surgery, not exhaustive, of course, for no single volume could be exhaustive.

The latest advances are referred to, briefly, it is true, but with sufficient clearness to stimulate to further study, and the teaching of the book is eminently conservative, but always judicious. We are glad to see that Dr. Ashurst at last feels compelled to modify his opinion regarding the value of antiseptic surgery. "While I can not," says he, "subscribe to the extravagant laudations which this plan of treatment receives at the hands of its more enthusiastic advocates, I believe that, when used with judgment, and, if I may be pardoned the expression, when *diluted with common sense*, it is capable of affording very valuable aid to the surgeon." When one, who has had any experience with aseptic surgery, compares this statement with that of the fourth edition, "the alleged superiority of the antiseptic method," he can easily believe that in the next

edition, Dr. Ashurst, with his usual fairness and honesty, will align himself even with "its more enthusiastic advocates."

In Mr. Holmes's work the editor has omitted, very wisely, we think, the chapter on the eye, thus enabling him to add more general surgical matter without increasing the size of the book. We quite approve this plan, since for eye surgery, one can with advantage consult one of the special treatises which deal with the subject in a more satisfactory manner.

The book of Mr. Holmes is particularly agreeable reading, the style being clear and easy, and the matter singularly free from dullness. In some particulars the book of Mr. Holmes is, however, open to unfavorable criticism. As regards the treatment of abdominal wounds, the tone is rather uncertain, and in the discussion of intestinal suture, no reference is made to the invaluable bone plates of Senn and the numerous modifications of his principle, a fault that is almost unpardonable in a book intended to inculcate the best methods of surgery. Ashurst's discussion of the subject, while it does not enter much into detail, calls the attention of the student briefly to these improvements in techniques, thus urging him to seek further light on this most important department of surgery. As usual Dr. Ashurst has included many valuable statistical tables, which have been revised up to the date of preparation.

There is so much that is good in these volumes, that we find it hard to call attention to deficiencies. No better single volumes on surgery can be found in the English language, and they are quite numerous. We commend them to our readers—the one as a resumé of good, honest English surgery, and the other of the best modern methods in general and of American practice in particular.

F. W. P.

A Text-book of Animal Physiology. With Introductory Chapters on General Biology and a Full Treatment of Reproduction. For Students of Human and Comparative (veterinary) Medicine and of General Biology. By Wesley Mills, M. A., M. D., L. R. C. P. (Eng.), Professor of Physiology in McGill University and the Veterinary College, Montreal. With over five hundred illustrations. New York: D. Appleton & Co., 1889. New Orleans: Armand Hawkins, 194 Canal street. Price, \$5.

It is not long since we had the pleasure of reviewing a work on comparative physiology, by an eminent American physiologist. It was with unalloyed pleasure that we witnessed the issuing of such an excellent work written by one of our own countrymen. It now falls to our lot to speak of another admi-

rable work on the same subject, by one of our Canadian brethren.

The Professor of Physiology in the famous McGill University has produced a work of high standing. His thorough mastery of his subject has enabled him to present to the medical world a work which is replete with accurate knowledge and the latest thereof, and to clothe his thoughts in a clear, running and attractive style. A perfect physician should be well educated outside of his profession as well as in it. Comparative medicine is outside of his profession, but in a certain sense it is in it; for, by comparing human structure, functions and ailments with those of animals, he obtains a broader view of subjects with which he daily deals. American medical colleges, as a rule, are not as thorough as those of Europe; time, however, will remedy this. The publication of two works of the physiology the lower animals is an encouraging sign, a sign that a healthy demand for broader biological culture exists on the part of our students and medical men.

To give even a short summary of Dr. Wells's interesting work would be impossible in a small space. It covers all of the bodily functions, and places side by side, in each chapter, the physiology of the same organs or systems in different animals. This forcibly stamps upon the memory the particular functions under discussion by a sort of association of ideas.

The introductory chapter on general biology and reproduction is highly interesting. The descriptions begin with the segmentation of unicellular organisms, and ascend to man. The development of the organs of man and some of the lower animals is fully described. The blood takes up 140 pages of the text; digestion, respiration, and the excretory functions are then described in a concise but thorough manner. The section on the nervous system covers 138 pages, and constitutes the most interesting part of a generally interesting book.

It is not necessary to make a synopsis of a work on physiology for medical men. They know what is the scope of such a work. In regard to the work before us, it suffices to say that it deals with the subject in a masterly manner. It is not massive or encyclopedic, nor does it contain unnecessary details or any controverted points that confuse the reader; on the contrary, the author, in delivering lectures on human and comparative physiology, has weeded out everything that might not be profitable to know. His book is the substance of his lectures so arranged as to form a systematic treatise. The author's language is elegant and easy; it does not require an effort to read it.

When American physicians become more generally aroused

to the value of a knowledge of comparative physiology they will be able to find valuable text-books by authors on this side of the water.

A. McS.

Terminologia Medica Polyglotta. A concise international dictionary of medical terms. Compiled by Theodore Maxwell, M. D., Camb., B. Sc., London, F. R. C. S., Edin. With the assistance of Dr. E. De La Harpe, etc. London: J. & A. Churchill. Philadelphia: P. Blakiston, Son & Co., 1890. (New Orleans: Armand Hawkins, 194 Canal street. Price, \$4.)

This polyglot dictionary is purely a work of compilation, but its scope is so extensive that its preparation must have required a colossal amount of work. No definitions are given; when a word is printed, its equivalents in five other languages are given.

What is the need of such a work? In former times it would have been useless, but nowadays it is almost an absolute necessity to an advanced medical man who desires to keep pace with the medical literature of other countries. Science lightly steps over geographical limits, and makes one family of those interested workers who are constantly endeavoring to unravel the mysteries of nature. The medical literatures of countries of different tongues are but chapters in one vast continued story, the readers of which are at some disadvantage when written in a strange language. To one desiring to know promptly all that occurs in medicine outside of his country, this polyglot dictionary will prove of incalculable value.

A brief outline of the plan of the dictionary may not come amiss. French is the key language. Suppose a German or Russian were to read in an English or American journal the word "elbow." If he were not certain of its meaning, he would turn to that word in English; the French equivalent is "coude;" he would then turn to "coude," and he would there find the meaning of "elbow" in German, Latin, Spanish, Italian, and Russian. With the exception of Russian, medical terms of all the languages are given, with their French equivalents; when the French name is found, it is easy to find the meaning of a word in six other languages.

This dictionary, from the nature of its text, is not destined to as great a degree of popularity as some entertaining works of fiction; but among serious men and earnest students, it will, we think, come to be regarded as an indispensable aid and companion.

A. McS.

PUBLICATIONS RECEIVED.

Annual of the Universal Medical Sciences. Edited by E. Sajous, M. D. Issue of 1890.

Transactions of the Southern Surgical and Gynecological Association. Vol. II. Second Session, Nov. 12, 13, and 14, 1889.

International Atlas of Rare Skin Diseases. Parts 1 and 2.

Leçons sur les Maladies du Larynx. Par le Dr. E. J. Moure. 1890.

Transactions of the American Pediatric Society. First Session.

Terminologia Medica Polyglotta; a concise international dictionary of medical terms. Compiled by Theodore Maxwell, M. D., Cantab.

Diseases of the Rectum and Anus; their pathology, diagnosis, and treatment. By Chas. P. Kelsey, A. B., M. D. Third edition.

Familiar Forms of Nervous Disease. By M. Allen Starr, M. D., Ph. D.

Gunshot Wounds of the Abdomen. By Aug. Schachner, M. D., of Louisville, Ky. *Reprint.*

Extra-uterine Pregnancy. Papers read before the Obstetrical and Gynecological Society of Baltimore, Md., January 14 and February 11, 1890.

A Successful Case of Nephrectomy. By George Ben Johnston, M. D., of Richmond, Va. *Reprint.*

Ueber Feuerbestattung. Vortrag gehalten am Abende des 13ten Februars 1890, etc. Von Prof. Dr. Friedrich Goppelsraeder. 1890.

Varicocele. By Thomas W. Kay, M. D., Scranton, Pa.

Railway Surgery. A practical work on the special department of railway surgery. By C. B. Stemen, A. M., M. D., LL. D. St. Louis: J. H. Chambers & Co. 1890.

Five Cases of Vaginal Hysterectomy for Malignant Disease of the Uterus; all recovered. By W. F. McNutt, M. D.

Essentials of Anatomy, and Manual of Practical Dissection, together with the Anatomy of the Viscera. By Chas. B. Nancrede, M. D.

What is the present medico-legal status of the abdominal surgeon? By Wm. Warren Potter, M. D.

The new treatment of peritonitis. By Emory Lanphear, M. D.

Dosimetry in Colorado and Reformation in the Practice of Midwifery by the Dosimetric Method of Practice. By J. E. McNeill, M. D.

Gunshot wounds of the abdomen, with cases. By David Barrow, M. D.

How the refinements of abdominal surgery have influenced general surgery. By David Barrow, M. D.

Two cases of Resection of the Cæcum for Carcinoma, with remarks on Intestinal Anastomosis in the Ileo-cæcal region. By N. Senn, M. D., Ph. D.

The Animal Suture; its place in Surgery. By Henry O. Marcy, A. M., M. D., L. L. D.

Transactions of the American Dermatological Association at its thirteenth Annual Meeting, held in Boston, Mass., etc.

A Historical Sketch of Surgery, ancient, mediæval, modern. By B. A. Matson, A. M., M. D. *Reprint.*

Concussion of the Spinal Cord, Brain, etc. By B. A. Watson, A. M., M. D. *Reprint.*

In Memoriam. Dr. Jacob Ford Prioleau. By Middleton Michel, M. D.

Address to the Medical Society. By Middleton Michel, M. D.

Large Doses of Iodide of Potassium. By Augustus A. Eshner, M. D. *Reprint.*

The Suppression of Consumption. G. W. Hambleton, M. D.

Ueber die Anwendung des Ichthyols bei Frauenkrankheiten. Von Dr. H. W. Freund. Sonder-Abdruck der Berliner Kl. Wochenschrift.

The Vagus Treatment of Cholera, as exemplified in returns from the Cholera Hospitals of Malta, during the epidemic of 1887. By Alexander Harkin, M. D., F. R. C. S. *Reprint.*

Fifth Annual Report of New York Cancer Hospital, 1889.

Clostridial Nephritis. A research conducted at Cooper Medical College. By F. V. Hopkins, M. D. *Reprint.*

A Study of Aneurism of the Pulmonary Artery, with the report of a case. By Charles B. Williams, A. B., M. D. *Reprint.*

Report of the Section on Practice of Medicine. By Wm. B. Caulfield, A. M., M. D. *Reprint.*

- Treatment of Torticollis (Wry-neck). By Chas. F. Stillman, M. Sc., M. D., Chicago. *Reprint*.
- Stricture of the Rectum; Intestinal Obstruction; Inguinal Colotomy. By Chas. B. Keelsey, M. D.
- Neuralgia. By E. P. Hurd, M. D., Detroit: Geo. S. Davis, 1890.
- A Rational Brace for the Treatment of Caries of the Vertebrae (Pott's Disease). By Charles F. Stillman, M. S. M. D.
- A Practical Splint for Inflammatory Conditions of Joints. By Charles F. Stillman, M. Sc., M. D.
- Apparent Cancerous Transformation of Syphiloma of the Tongue. Excision of the tongue by the galvano-cautery. By G. Frank Lydston, M. D.
- Twenty Consecutive Cases of Abdominal Section. By L. S. McMurtry, A. M., M. D.
- The Cure of Hemorrhoids by Excision and Closure with the Buried Animal Suture. By Henry O. Marcy, A. M., M. D., LL. D.
- Sur le traitement électrique des fibromes utérins. Par les docteurs L. Championnière et Danion.
- The Brooklyn Health Exhibition. *Reprint from the Sanitarian*.
- Dislocation of Cervical Vertebra without Fatal Results. By G. L. Walton, M. D.
- Professional Atmosphere and Morals, or Patents and Secrets v. Liberal Profession. By Horatio C. Merriam.
- Some Reflections on Morning Sickness. By B. E. Hadra, M. D.
- A Plea for Early Laparotomy for Catarrhal and Ulcerative Appendicitis, with the report of two cases. By N. Senn, M. D., Ph. D.
- De la mobilisation de l'étrier. Par le Docteur E. J. Moure. Communication faite au Congrès International d'Otologie et de Laryngologie de Paris, 1889.
- An Experimental Study of Intestinal Anastomosis. By John D. S. Davis, M. D., Birmingham, Ala.
- Epicystic Surgical Fistula for the relief of Vesical Catarrh. By John D. S. Davis, M. D., Birmingham, Ala.
- The Blunt Curette in Uterine Hemorrhage. By Thomas W. Kay, M. D.
- Special Hospitals for the Treatment of Tuberculosis. By Lawrence F. Flick, M. D.
- Normal Liquid Ergot in Enuresis Nocturna. By Lewis H. Adler, Jr., M. D.
- Report of Proceedings of Illinois State Board of Health. Annual meeting, Springfield, January 30, 1890, and February 13, 1890.
- Free Division of the Capsule of the Kidney for the Relief of Nephralgia. By L. McLane Tiffany, A. M., M. D.
- Abdominal Section for Traumatism, with Tables of 234 Cases. By Thos. S. K. Morton, M. D.
- On the Evil of Opium Eating. By W. S. Watson, M. D.
- Pulmonary Consumption in the Light of Modern Research. By Stephen Smith Burt, M. D.
- The Four Commencements. Valedictory Address to Graduates. By J. M. Bodine, M. D.
- A Lecture on Sexual Perversion, Satyriasis, and Nymphomania. By G. Frank Lydston, M. D.

MEDICAL ITEMS.

The second annual convention of the Tri-State Medical Association of Georgia, Alabama, and Tennessee, will convene in Turner Hall, Chattanooga, on Tuesday, October 14, and continue in session three days.

Reduced railroad and hotel rates have been secured.

Applications for space in exhibit hall must be sent to Dr. W. L. Gohagan, secretary of the executive committee, P. O. Box 542, Chattanooga, Tenn.

The following is a list of the officers of the Orleans Parish Medical Society:

PRESIDENT—Chas. Chassaignac, M. D.

VICE PRESIDENTS—F. W. Parham, M. D., E. Souchon, M. D., R. Matas, M. D.

SECRETARY AND TREASURER—M. J. Magruder, M. D.

CORRESPONDING SECRETARY—A. G. Friedrichs, M. D.

ORGANIZATION (EX-OFFICIO)—Dr. Chas. Chassaignac, chairman; Dr. E. Souchon, Dr. F. W. Parham, Dr. R. Matas, Dr. A. G. Friedrichs.

JUDICIARY—Dr. H. D. Bruns, chairman; Dr. S. Logan, Dr. A. W. deRoaldes.

STATE MEDICINE LEGISLATION—Dr. P. E. Archinard, chairman; Dr. S. E. Chaillé, Dr. Henry Bezou, Dr. John B. Elliott, Dr. Wm. Schuppert.

PUBLICATION—Dr. A. McShane, chairman; Dr. L. F. Salomon, Dr. Y. R. LeMonnier.

SCIENTIFIC ESSAYS, REPORTS, ETC.—Dr. F. W. Parham, chairman; Dr. V. L. Gilmore, Dr. G. F. Patton.

CONFERENCE—Dr. C. A. Gaudet, chairman; Dr. P. Michinard, Dr. W. S. Bickham.

LIBRARY—Dr. H. W. Blanc, chairman; Dr. R. Matas, Dr. H. D. Bruns.

The American Rhinological Association will hold its eighth annual session at Louisville, Ky., October 6, 7, 8.

All leading subjects relating to nasal and naso-pharyngeal diseases will be open for discussion by a leading fellow of the Association. The medical profession is cordially invited to attend.

The secretary, R. S. Knodes, Omaha, Nebraska, will furnish any information to physicians desiring to become members.

The Mississippi Valley Medical Association will meet in its 17th annual session at Louisville, Ky., October 8, and 9, 1890. A full attendance of the profession of the valley is desired. Gentlemen having papers to read will please send the titles as soon as possible to the secretary, Dr. E. S. McKee, 57 W. Seventh St., Cincinnati. Gentlemen who read paper at the last meeting will confer a favor by sending the secretary copies of same, to complete as far as possible the transactions.

MORTUARY REPORT OF NEW ORLEANS

FOR JULY, 1890.

CAUSE.	White	Colored	Male	Female	Adults	Children	Total
Fever, Yellow							
“ Malarial (unclassified)....	10	6	11	5	7	9	16
“ Intermittent	3		1	2	2	1	3
“ Remittent	4	4	7	1	7	1	8
“ Congestive	5	5	5	5	8	2	10
“ Typho-Malarial.....	3	3	2	4	3	3	6
“ Typhoid or Enteric.....	5	2	3	4	6	1	7
“ Puerperal							
Scarlatina	1	1	1	1		2	2
Small-pox							
Measles	3		2	1		3	3
Diphtheria	4	2	1	5		6	6
Whooping Cough	3	1	2	2		4	4
Meningitis	8	1	4	5	2	7	9
Pneumonia	9	11	12	8	9	11	20
Bronchitis	15	5	8	12	4	16	20
Consumption	39	41	44	36	80		80
Cancer	12	2	5	9	14		14
Congestion of Brain	10	1	6	5	7	4	11
Bright's Disease (Nephritis) ..	5	10	9	6	15		15
Diarrhœa (Enteritis)	26	17	23	20	21	22	43
Cholera Infantum	20	6	14	12		26	26
Dysentery	3		1	2	3		3
Debility, General	2	4	1	5	6		6
“ Senile	13	10	9	14	23		23
“ Infantile	6	3	5	4		9	9
All other causes	172	110	154	128	166	116	282
TOTAL	381	245	330	296	383	243	626

Still-born Children—White, 26; colored, 22; total, 48.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 24.78; colored, 42.30; total, 29.57.

DIPHTHERIA RECORD FOR JUNE, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	7	1	8	1	2	1	3
2	3	1	4	2	1	1	2
3				3			
4				4			
5				5			
6	1		1	6	1		1
7				7			
	11	2	13		4	2	6

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—JULY.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hund'ths..	SUMMARY.
	Mean	Max.	Min.		
1	84	91	76	O	Mean barometer, 30.032.
2	84	93	76	T	Highest barometer, 30.225, 30th.
3	83	92	74	T	Lowest barometer, 29.860, 22d.
4	84	93	76	O	Mean temperature, 81.6.
5	88	96	79	O	Highest temperature, 96, 5th; lowest, 68, 27th.
6	88	95	80	O	Greatest daily range of temperature, 20.
7	80	90	70	1.14	Least daily range of temperature, 4.
8	80	86	74	.59	MEAN TEMPERATURE FOR THIS MONTH IN—
9	81	88	74	.05	1871.....83.5 1876.....82.9 1881.....84.3 1886.....79.8
10	84	93	74	O	1872.....82.0 1877.....83.4 1882.....80.5 1887.....80.5
11	82	91	73	.52	1873.....81.9 1878.....84.3 1883.....83.5 1888.....81.5
12	84	91	78	O	1874.....81.2 1879.....83.2 1884.....85.4 1889.....82.6
13	82	89	76	O	1875.....81.9 1880.....81.4 1885.....82.9 1890.....81.6
14	82	90	75	T	Total deficiency in temp'ture during month, 38.
15	84	91	76	.16	Total deficiency in temp'ture since Jan. 1, 432.
16	84	90	77	.50	Prevailing direction of wind, S. E.
17	84	92	77	O	Total movement of wind, — miles.
18	84	90	78	T	Extreme velocity of wind, direction, and date,
19	84	91	77	O	45 miles, N., 7th
20	84	93	74	.64	Total precipitation, 6.59 inches.
21	82	90	73	1.03	Number of days on which .01 inch or more of
22	82	87	77	.01	precipitation fell, 15.
23	76	78	74	.20	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
24	74	78	70	.80	FOR THIS MONTH IN—
25	77	81	73	.12	1871.....4.34 1876.....4.73 1881.....6.97 1886.....4.35
26	76	83	70	.04	1872.....0.43 1877.....6.41 1882.....6.84 1887.....7.85
27	75	82	68	.23	1873.....5.22 1878.....6.21 1883.....3.33 1888.....2.02
28	80	86	73	T	1874.....12.93 1879.....7.04 1884.....4.12 1889.....9.13
29	78	84	72	T	1875.....6.57 1880.....11.22 1885.....6.15 1890.....6.59
30	79	86	72	.56	Total excess in precip'n during month, .17.
31	82	88	75	T	Total deficiency in precip'n since Jan. 1, 12.50.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer.*

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NEW SERIES:
 Whole No. 309.

September, 1890.

VOL. XVIII.
 No. 3.

NEW ADVERTISEMENTS IN THIS ISSUE.

	PAGE.		PAGE.
Battle & Co.....	11	Sharp & Dohme.....	19
Martin's Vaccine Virus.....	12	The Wm. S. Merrell Chemical Co.....	9
Schieffelin & Co.....	3	Victor Safe and Lock Co.....	29

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Baltimore Medical College.....	28	New York Medical Journal.....	19
Battle & Co.....	11	N. Y. Pharmaceutical Co.....	6
Bellevue Hospital Medical College.....	20	Osborne, Robert J.....	15
Boehringer & Soehne.....	10	Planten's Capsules.....	12
Bowden Lithia Springs Co.....	26	Reed & Carnrick.....	18
Celerina.....	21	Robinson-Pettet Co.....	2
Cerebro-Spinant—I. O. Woodruff & Co.....	23	Sanitarium—Von Gohren's.....	18
Claudel, Optician.....	28	Sanitarium—Sunny Side.....	28
College of Physicians and Surgeons.....	12	"Sanitas" Antiseptics, etc.....	1
Cook, Gus.....	20	Schieffelin & Co., W. H.....	3
Dioviuburnia.....	31	Scott's Emulsion.....	1
Graham & Son, L.....	12	Svapnia.....	12
Health Restorative Co.....	4	Tarrant & Co.....	14-17
Kentucky School of Medicine.....	28	Tasteless Quinine.....	15
Lehn & Fink.....	24	The American Practitioner and News.....	22
Lilly & Co., Eli.....	8	Wagner Medical Manufacturing Co.....	7
Louisville College of Dentistry.....	20	Wheeler's Tissue Phosphates.....	15
Marchand's Peroxide of Hydrogen.....	30	Woman's Medical College.....	20
Mariani & Co.....	5		
McDermott, A.....	15		
Medical College of Alabama.....	25		
Medical Dep't of the Tulane University.....	13-20		
Medical Dep't University of N. Y.....	27		
Moore-McGregor Medication.....	28		

COVER.

Buffalo Lithia Water.....	3
Fairchild Bros. & Foster.....	2
Fellows, James I.....	4
Sharp & Dohme—Chemists.....	2

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

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EDITORIAL OF I. N. LOVE, M. D., Professor of Diseases of Children, Marion-Sims College of Medicine, and Editor of the *Medical Mirror*.

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• J. M. MILLER, M. D., *Blossburg, Ala., April 8, 1890.*

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READ THE ADVERTISEMENTS, the knowledge gained in one reading may lead to results compared with which the cost of your journal is but a bagatelle.

OUR OCTOBER NUMBER

Will contain an interesting article on "SALPINGITIS," by DR. J. W. McLAUGHLIN, of Austin, Texas.

In this number we expect to commence a series of articles giving a summary of the practical scientific work of the Tenth International Medical Congress, held in Berlin, in August, 1890. We have arranged with our own correspondent to furnish us with well digested abstracts of the best work of the Congress.

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NEW SERIES.

VOL. XVIII.

OCTOBER, 1890.

WHOLE No. 310.

No. 4.

*Paullum sepultæ distat inertæ
Celata virtus.*—HORACE

The

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TABLE OF CONTENTS.

	PAGE.
Salpingitis—By J. W. McLaughlin, M. D.	261
Asepsis and Antisepsis—By Henry J. Scherck, M. D.	273
Lectures on Scabies—By Henry Wm. Blanc, M. D.	279
A Case of Tetanus Treated with Eserine—By Geo. H. Lee, M. D.	295
Proceedings of Societies	293
London Letter	308
The Latest Phase in Tuberculosis	311
Quinine Eruption—A Peculiar Idiosyncrasy	313

	PAGE.
Report of Tenth International Medical Congress	314
Surgery	315
Medicine	318
Book Reviews and Notices	326
Publications Received	330
Obituary	332
Medical Items	333
Mortuary Report	337
Meteorological Summary, August, 1890	338
Publishers' Department	339

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261

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VOL. XVIII.

OCTOBER, 1890.

No. 4.

ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

SALPINGITIS.*

By J. W. McLAUGHLIN, M. D., Austin, Texas.

In 1857, thirty years before its time, Bernuts published a remarkable brochure on the etiology and pathology of pelvic inflammations. A thorough, painstaking investigation of this subject, based upon numerous necropsies, convinced Bernuts that pelvic cellulitis does not exist as a separate disease, and that the literature upon this subject teaches errors which should be consigned to the pages of medical romance. He claimed that pelvic cellulitis does not exist except as a phlegmon in puerperal cases; that the condition so described is pelvic peritonitis resulting from, and associated with salpingitis. These advanced views, which differed so radically from those entertained at the time, were not accepted save by a few physicians of unusual opportunities for original investigation. As a matter of fact, standard works on gynecology, until within the last few years, have devoted pages to the discussion of pelvic cellulitis, whilst they have dismissed that of salpingitis with brief and unsatisfactory notices. The large amount of attention that surgery of the tubes and ovaries has received within the last few years, and the more correct knowledge we now possess of the causes and prophylaxis of inflammation, have caused medical opinion to swing around and place itself in line

*Read before the Austin District Medical Society.

with the views regarding salpingitis which Bernuts taught over thirty years ago.

The following quotation from Dr. Wylie's late article on salpingitis will illustrate this statement :

"In this country, at least before 1882 and 1883, characteristic cases of salpingitis were very common, and went under the name of pelvic cellulitis. If the ovary happened to be large enough to be made out by examination, they would sometimes be called ovaritis. If the uterus happened to be markedly displaced backward and fixed, or twisted to one side, they were termed cases of retroversion, or lateral version with adhesion, and they were treated as though the displacement was not only the chief disease but the only one to be treated. We were taught to replace the uterus and to keep it in its ideal normal position, and to believe that, if we could do so, the patient would be cured. If the soft pessary caused a septic endometitis and salpingitis and renewed the local peritonitis, or if the repositor, used forcibly to replace or move the adherent uterus, burst a distended tube and caused a peritonitis, we were told that we had lighted up an old cellulitis, but that we should not be discouraged. The patient was put to bed and dosed with anodynes until the acute attack subsided. She was then sent home for six months or a year, to remain in bed or take such exercise as her ailment permitted. She was ordered hot water vaginal injections every day, and desired to return to have her uterus pried up. The previous treatment was continued until the so-called cellulitis was again started up, or her money or her faith was gone."

The term salpingitis is used to denote inflammation of the Fallopian tube or tubes. It may be acute or chronic. The nature of the inflammation, as well as the therapy and prognosis of the case, depends upon the nature of the infecting cause or causes. Classifications are based upon the pathological conditions which are present, or upon the nature of the cause which gave rise to the disease. Thus, Martin, of Berlin, quoted by Albert Doran, describes three forms of salpingitis. In one form the folds of the mucous membrane lining the tubes becomes swollen and there is an abundant infiltration of small cells, whilst the epithelium mostly remains unchanged;

the vessels are engorged and there are numerous ecchymoses. This form Dr. Martin calls *endosalpingitis* or *salpingitis catarrhalis*. When the muscular coat is affected in the same manner, so that the fibers are forced apart, the mucous membrane bulges out of the ostium, the lumen of the tube becomes obstructed, especially toward the uterine extremity, and the tube swells up, forming a thick cord, we have Dr. Martin's second form, which he terms *salpingitis interstitialis*. In the third form there is small-celled infiltration, shedding of epithelium, and the formation of pouches in the mucous membrane of the tubes. These pouches penetrate the mucosa, and may involve the whole wall of the tube, which becomes enlarged and tortuous. Under the microscope the substance of the tube is found to be riddled with gland-like follicular cavities, mostly lined with a single layer of cylindrical epithelium; this variety Dr. Martin calls *salpingitis follicularis*.

Dr. Sanger, of Leipsic, divides the different forms of salpingitis into three groups, depending upon their etiology, as follows:

Group I. Forms of salpingitis caused by known specific microbes, viz.: 1, salpingitis gonorrhoeica, caused by the gonococcus of Neisser; 2, salpingitis tuberculosa, caused by the bacillus tuberculosis of Koch; 3, salpingitis actinomycotica, produced by the actinomyces bovis of Bollinger.

Group II. Forms of salpingitis due to specific microbes identical with those producing traumatic infection, viz.: forms of salpingitis septica, which he subdivides into pyemica, ichorosa, diphtheritica and purulenta.

Group III. Forms of salpingitis produced by specific but as yet unknown microbes; for example, those caused by syphilis, measles, scarlet fever, typhoid fever, small pox, or cholera.

ETIOLOGY.

It can be safely asserted that in the large majority of cases salpingitis has resulted from an infection of the vagina or endometrium. The nature of this infection may vary with individual cases; it may be an uncured rent in the vagina or cervix uteri which furnishes the infecting material, or perhaps an abortion, or a gonorrhœa, or any suppurating traumatism of

the genital tract. It frequently results from an uncleanly surgical operation upon the vagina or uterus. In fact, infectious vaginitis or endometritis in its various forms is thought to be a prolific cause of salpingitis. Other causes, as infectious fevers, exanthemata, and diseases due to known microbes are recognized. The fact that the disease may be conveyed from the hands of the surgeon or his instruments, sponges, ligatures, etc., should certainly impress upon us the necessity of thorough asepsis in all surgical treatment of the vagina and uterus. We should also cure, as speedily as possible, a gonorrhœa in the female, as this is recognized as a frequent cause of this disease. Bandl says secondary diseases of the tubes occur most frequently from gonorrhœal afflictions and from puerperal diseases, acute exanthemata, typhus, cholera, tumors of ovaries, and uterus. As regards age, salpingitis is found to occur most frequently during the child-bearing period. Thus Hennig found it in childhood, five times; 17 to 30 years, ten times; 31 to 46 years, sixteen times; 47 to 60 years, eight times; 61 to 80 years, five times.

Dr. Wylie says: "On a careful study of my cases operated upon, now numbering 130, only about 10 per cent could claim to be virgins, and in the great majority the salpingitis could be traced to a septic endometritis following abortion or labor."

Dr. Martin has carefully studied 287 cases, every precaution being taken against sources of fallacy. Only nine of these were under 20 years of age. A large majority were in the active period of sexual life; 220 were married; 67 single, whether virgins or not; 113 had at least never borne children; 61 had aborted once or oftener. In almost every case other pelvic organs were affected besides the tubes, more often diseases of the endometrium and uterus. In 147 cases the disease had followed acute or chronic affections of the endometrium. In 70 the salpingitis was due to childbirth. In 55 it was produced by gonorrhœa. In 122 cases there was a morbid condition of the pelvic peritoneum, ovary, and broad ligament. In 91 cases the disease was bilateral, in 58 the right only, in 138 the left. Both tubes were affected in more than one-fourth the cases caused by endometritis, in one-fourth of the puerperal cases, and in one-half of the gonorrhœal cases.

In not a single case was it evident that the disease had commenced as a salpingitis; it seemed to have spread from neighboring organs.

SYMPTOMS AND DIAGNOSIS.

There are no hard and fast rules, no pathognomonic symptoms by which we can recognize salpingitis and differentiate it from other pelvic diseases. In forming a diagnosis we are compelled to rely largely upon the clinical history of each individual case. To ascertain when and how the trouble began, whether it soon followed an abortion or labor, an acute inflammation of the uterus or its endometrium, the previous existence of cervical catarrh, and the possibility of its gonorrhœal origin should not be overlooked; the husband, if one exists, should be interrogated; ascertain if he is syphilitic or has or had gonorrhœa or gleet. Noeggerath claims that gonorrhœa often remains in a latent condition in those who have had the acute form of the disease, but have long supposed themselves well; that this latent condition is infectious and is often responsible for salpingitis in the wives of its victims; that tubal inflammation often results from traumatisms of the vagina or uterus, whether received accidentally or by the surgeon's knife (in the absence of antiseptic precautions), from a reckless use of the uterine sound, or from dirty pessaries or tampons, is an established fact. The possibility of tubercular salpingitis should not be overlooked. The subjective symptoms depend largely upon the character of the inflammation, whether it is catarrhal or syphilitic in its causation. As a rule, salpingitis catarrhalis is, comparatively speaking, a mild disease, and the tissues and organs adjacent to the inflamed tube remain in a normal condition, unless the tube should rupture; hence, in this form, there is not usually the amount of pain and constitutional disturbance that we find in the septic forms; these excite inflammations in the adjacent tissues and organs, give rise to pelvic peritonitis, and often result in extensive adhesions. Frequently recurring attacks of pelvic peritonitis, retroversion or lateral version of the uterus with adhesions and without evident cause will in all probability depend upon salpingitis; menstruation is irregular and painful, whilst menorrhagia or metrorrhagia is very common; pelvic pain and a burning sensation in the ovarian region are symptoms

frequently relied upon. In those cases where the uterine extremity of the tube is not sealed by adhesive inflammation, periodic discharges of mucus or pus may pass from the uterus. Objectively, we will often find enlargement of the uterine adnexa. Bandl says, with reference to those distended tubes, that the diagnostic points are: 1. Shape of the tumor, it being intestine-like, and showing swellings and constrictions not found in other pelvic tumors, and an inconstant fluctuation. 2. Seat of tumor, which may be in Douglass' pouch or raised above the pelvic brim, or it may be seated at the level of the cervix uteri. Between this and the tubal swelling there is usually a furrow. The bilateral appearance of the disease, as Kiwisch has noticed, can give us some points for diagnosis. The uterus is displaced to a variable degree; it is crowded to the side opposite to that of the larger swelling, or a large tumor fills Douglass' pouch; the uterus is pushed forward and upward exactly as occurs in a case of hematocele retro-uterina. 3. There is usually a larger or smaller portion of less dilated tube between the uterus and the tumor, which is felt as a constriction.

It would unduly prolong this paper were I to enter into the differential diagnosis. Suffice it is to say that often it is impossible even by the bimanual method of examination to distinguish salpingitis from exudations in the broad ligaments, tumors of the tube, pediculated sub-peritoneal uterine fibroids, cysts of the broad ligament, hematoceles, or remnants of inflammation of the pelvic peritoneum.

PROGNOSIS AND TREATMENT.

The prognosis of salpingitis will depend upon the form of the disease and the nature of the infecting cause. In catarrhal inflammation of the tube, where the contents are usually bland, the prognosis as regards the life of the patient and the cure of the disease is good, but as regards the usefulness of the tube it is bad, and if both tubes are involved sterility of the patient is almost certain to result. The reason for this is to be found in the fact that at a very early stage of tubal inflammation the fimbriæ, found at the abdominal or distal end of the tube, become adherent through adhesive inflammation of their peritoneal coverings, thus closing the tube to the passage of ova.

In the septic forms of the disease the tubes fill with pus

of an acrid and poisonous character. This quality of the pus is dependent upon microbic action and varies in intensity with the microbic cause or nature of the microbe; pelvic peritonitis and adhesive inflammation of the contiguous parts will frequently ensue, or the infection may be so virulent and spread from the tubes to adjacent tissues so rapidly that adhesions have no time to form; in these cases general peritonitis and septicæmia are the causes of death. Rupture of a pyosalpinx is a possibility that should not be overlooked. When it occurs nothing short of an immediate abdominal section offers the least hope, and even this is a *dernier resort*.

In the acute form of salpingitis the patient should be put to bed and complete rest enjoined; anodynes to relieve pain and antiphlogistics to control fever and combat inflammation are indicated. Poultices to the abdomen, and the use of hot antiseptic vaginal irrigations, if they can be given without unduly disturbing the patient, will afford relief and prove serviceable. After the acute symptoms have subsided great benefit can often be given by carefully conducted massage treatment. In this way the contents of the tubes may often be forced backward into the womb and discharged through the vagina; we should not lose sight, however, of the danger of rupturing the distended tube by rough or incautious handling. As salpingitis is usually secondary to endometritis, remedies to relieve this condition become very important. Dr. Martin and Dr. Wylie both speak in terms of praise of the benefit they have given from thoroughly correcting the endometrium in these cases. In the event of failure to give relief by medical means, and an abscess should form or the distended tube should locate itself within reach of surgical means, it should be opened at the most dependent or desirable point; sometimes this will be found in the vagina, fortunately if in Douglass' pouch; in other cases the point of election will be in the groin over Poupart's ligament, or in the ischio-rectal fossa. If in the vagina, and the tubal swelling can be felt pressing down in Douglass' pouch, we will have presented a safe outlet for the escape of the abscess contents. With antiseptic preparations and precautions a canula and trocar should be passed into the most prominent part of the swelling, the pus drawn off and the cavity washed out with

an antiseptic wash. A long probe without a handle should then be passed into the pus cavity through the canula, which should be removed without disturbing the probe; this is left as a guide for the blades of a steel dilator, which should be introduced and the opening stretched large enough to admit the forefinger. A rubber drainage tube should then be introduced and fastened to the lips of the wound with silver wire. The pus cavity should be frequently washed out with antiseptic solutions through the drainage tube. Other portions of the vaginal vault are less favorably situated for puncture. In the anterior portion, the bladder would almost certainly be injured; whilst in the lateral portions are situated the vessels of the parametrum and higher up are found those of the broad ligament. The ureter also is to be found in this locality and would be in considerable danger of injury from a knife or trocar if passed through the lateral fornices of the vagina. If the swelling should point above Poupart's ligament or in the ischio-rectal fossa an opening through either of these localities could be safely and easily made, through which a tube could be introduced and good drainage obtained.

Above Poupart's ligament, the incision should be carried down through the skin and cellular tissue with the blade of the knife; then with its handle or with the operator's finger the opening should be carried downward behind the peritoneum until the immediate vicinity of the pus cavity is reached. If the tube or the walls of the pus cavity are found adherent to the peritoneum a free incision into the cavity should at once be made. If adhesions are not formed we are advised to fill the wound with iodoform gauze and wait until such adhesions do take place, and then open and drain.

"Are the tubes and ovaries to be sacrificed in all cases of salpingitis?" is the title of a paper read by Dr. Polk in the American Gynecological Society in 1887.

"By the term salpingitis he meant that disease formerly known as pelvis cellulitis, and characterized by inflammation of the planes of cellular tissue belonging to the uterus and its appendages."

Dr. Polk's conclusions were that for purposes of procreation there was no utility in leaving the occluded tube in position,

but to satisfy the patient's desire to escape mutilation, excepting to save life or restore health, the ovaries and tubes should not be removed."

The discussion was continued by Dr. Martin, of Berlin; Emmett, of New York; Goodell, of Philadelphia, and Bantock, of London, who would unhesitatingly answer in the negative the question of Dr. Polk. I understood, however, from the tenor of their remarks, which I had the pleasure of hearing, that neither of the gentlemen named would hesitate to remove the uterine appendage when such means became necessary to save life or restore health. A Fallopian tube distended with pus is a constant menace to the woman's life, and unless simple means of relief can be had it would seem that its removal was not only justifiable but is necessary to her safety.

A serious difficulty, I apprehend, is to determine when other means of relief have been tried sufficiently long and when the removal of the uterine adnexa becomes an imperative necessity. Some of the methods of giving relief, other than surgical removal, having been referred to, there remain for discussion two methods; one, so far as I know, originated with myself, and has proven successful in other hands as well as my own; the remaining method of treatment is by electricity, which was introduced and has been ably advocated by Apostoli, of Paris. In the year 1885, I published in Daniels' *Texas Medical Journal* the report of a case of salpingitis, following puerperal sepsis, which was successfully treated by a new method. The patient had rigors, fever, sweats and the usual symptoms of sepsis. These came up a few days after a protracted labor and instrumental delivery. They were soon controlled by intra-uterine antiseptic irrigations. Several days after the disappearance of all abnormal symptoms she had another rigor and fever, which were quickly succeeded by others. Examination revealed a well contracted womb and cervix. In the left Fallopian region there existed a well defined enlargement, which was very sensitive to pressure. To this region the patient referred all her pain, which was quite severe. The condition of the patient was very critical, and looked as though her death would speedily occur unless some means of relief were quickly found.

In this emergency the idea of emptying the distended tube into the uterus and irrigating its cavity with antiseptic solutions occurred to me. This was done by forcibly filling the uterine cavity with a solution of sublimate. The uterine contractions which resulted forced open the uterine end of the tube and a quantity of pus was discharged from the vagina with the solution which had been injected. After the discharge of pus had occurred, immediate relief was obtained and the patient made a speedy recovery.

The report of this case induced other physicians to give this method of treatment a trial in cases of salpingitis. Dr. Tucker, of San Augustine, writes me that he has found it entirely successful in several cases. One of his patients had consulted an eminent gynecologist of New York City, who pronounced her disease pyosalpinx, and gave her no hope of a cure except by the removal of the uterine appendages. She declined to submit to this operation, returned home, and became a patient of Dr. Tucker, who treated her by the new method with complete success. I have treated quite a number of persons with different forms of salpingitis, two of which resulted from gonorrhœa, by this method. A majority have been cured and all obtained great relief.

The plan of treatment I recommend is first to empty the tube by properly directed massage, cleanse the vagina with warm sublimate solution and then with clean hands and instruments which have been made perfectly aseptic I open the uterus with a steel divulser and pass into the cavity a female catheter; if necessary I pack around this, where it enters the cervix, sterilized cotton. A sublimate solution of 1 to 3000 is then injected through the catheter into the uterine cavity and permitted to return in order to first cleanse the cavity of the uterus; after this is done the sublimate solution is again injected with considerable pressure, sufficient to place it in the position, in the tube, that had formerly been occupied by the pus; this is then allowed to drain away through the catheter, and the operation repeated once or oftener until the cavity of the tubes and of the uterus have been thoroughly cleansed. In short, I propose to treat accumulations of pus or other septic fluids located in the tubes as we would treat similar accumulations located in other accessible portions of the body.

Can the inflamed Fallopian tubes be irrigated in the manner thus described? The Fallopian tubes and the uterus are derived from the same germinal layer and are both alike developed from the ducts of Müller. The muscular and mucous layers of the tube are, in fact, a continuation of the muscular and mucous structures of the uterus and are affected similarly by similar causes. Inflammation of the uterus destroys, in great measure, its muscular contractility and renders the organ relaxed and flabby. We have all witnessed the patulous os and flabby cervix in septic metritis or endometritis, due to the fact that the organ has lost its muscular tonus. That muscular tissue underlying an inflamed mucous or fibrous membrane does lose tonus, in fact becomes paralyzed, is well known. The frequency with which this occurs has caused this fact to be formulated into a rule, which is known as the "Law of Stokes."

Now when the tube is inflamed we would have the same relaxed condition of its muscular structure, including that portion of the uterus corresponding to its Fallopian opening into the diseased tube. Such being the case, there would be offered no difficulty in forcing fluids out of the tube into the uterus by properly directed massage, or out of the uterus into the tube by a moderate degree of pressure.

As the abdominal end of the tube soon becomes sealed through adhesive inflammation of the peritoneal surfaces of the fimbriæ, there would exist but little or no danger of the tubal contents escaping into the peritoneal cavity. Clinically many cases are on record where, by gentle pressure, pus has been forced from the tube into the uterus to escape into the vagina. In numerous other cases this occurs periodically without assistance. Dr. Alfred Gonner, of Basle, says: "In removing some placental tissue from the uterus of a young woman who had aborted three months previously, he was able to pass his curette with the greatest ease to the left, for eight inches beyond the os externum. No bad results followed, and six weeks later involution of the uterus was found to be complete. About the same time Dr. Gonner was able to pass the sound seven inches to the right beyond the os externum in a young patient a month after delivery. On the following day, Dr.

Widmer, assistant physician to the gynecological clinic at the University of Basle, without having heard the results of Dr. Gonner's examination, passed the sound in the same direction nearly seven inches. A piece of retained placental tissue was removed from the dilated end of the tube.

Can fluids injected into the uterus, be forced, by moderate pressure, into a healthy Fallopian tube? In answering this question in the negative I think I am borne out by experiments made to determine this point on the cadaver. The uterine opening of the Fallopian tube in the normal condition is almost too small to admit the passage of more than a few drops of fluid, if in fact it will admit the passage of any. Certainly when this opening is lessened in size through that contraction of the womb which the presence of fluid in its cavity would excite, there would exist an effectual bar to the passage of any fluid into the healthy tube.

Is this method adapted to the treatment of all forms of salpingitis? It is not. When both ostia are firmly sealed, and the tube is greatly distended with pus or other fluid, especially in the catarrhal form, when the walls of the tube are very thin and are not supported by adhesions to contiguous surfaces no good could result from intra-uterine injections; on the contrary, serious consequences, such as rupture of the tube might result. This treatment promises the best results in those forms of salpingitis which are caused by, and often associated with, septic endometritis, those which follow abortions or labor, or are the results of septic traumatism, or gonorrhœa and similar causes. These cases constitute by far the larger portion of all cases which occur.

The cure of an existing endometritis, which results from this method, gives it an important advantage over other methods, even that of curettement recommended by Martin and Wylie.

Where salpingitis exists with the so-called chronic metritis, the uterine walls being thick and unyielding from an excessive growth of interstitial tissue, the hyperplasia of Thomas, I would not expect the best results from the new treatment; it would no doubt benefit the endometritis and possibly the salpingitis, but could have no beneficial effect upon the uterine hyperplasia. This class of cases, it would seem, are best

adapted to the course of treatment by the galvanic current as recommended by Apostoli.

What are the dangers to be feared from intra-uterine injections in cases of salpingitis?

In suitable cases, when the contents of the tube can be emptied by massage, if thorough antiseptic rules are observed in preparing the patient for the treatment, and in performing the operation, these injections can be made without the least danger; of course judgment must be used in determining the amount or force required to wash out a tube without over-distending it.

In nearly all my cases the treatment caused considerable pain; this, however, can be easily controlled, and it has never been followed by fever or other bad result.

It was my purpose when I began this paper to include in its pages a brief résumé of the treatment of ovaro-salpingitis by means of the electric current. This method of treatment was first introduced by Apostoli, who is an able and earnest advocate for its use. I find, however, that I can not do this without occupying more time than I am entitled to or am willing to take, perhaps, from other gentlemen who wish to be heard. Those who are interested in this matter will find an able brochure, giving the rationale, technique, and therapeutics of this method of treatment, prepared by the Apostoli for the last meeting of American Medical Association, and published in the July number (this year) of the journal of the association.

ASEPSIS AND ANTISEPSIS, AS PRACTISED IN THE OBSTETRICAL DEPARTMENT OF THE ROYAL HOSPITAL FOR WOMEN IN DRESDEN.

(KÖNIGLICHE FRAUENKLINIK.)

With permission of PROF. DR. LEOPOLD, by HENRY J. SCHERCK, M. D.

The success following births and operations on women has tempted me to send this communication to the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. There is no doubt that its brilliant record is entirely due to the system of asepsis and antisepsis in vogue under the very able direction of Prof. Dr. Leopold.

A few words descriptive of the hospital will, I hope, be pardoned before giving the readers the minutiae of its management.

The *Königliche Frauenklinik*, as it is termed here, is located on the outskirts of Dresden in a most picturesque portion. It was built in the year 1869, and contains, in all, 190 beds.

	60 for cases in labor.
	60 for children.
	24 for pregnant women before labor.
16 first-class,	} 46 for gynecological cases.
15 second-class,	
15 free.	
<hr/>	
190	

It is a large building, three stories high, and built in the form of a hollow square.

The number of births averages about 1,350 yearly; besides this there is a large gynecological out-clinic, and from this clinic only those cases calling for operation are admitted.

The hospital is a government institution and, I am informed, it was built for three objects:

1. The treatment of obstetrical and gynecological cases among the poor.
2. The education of women for the practice of midwifery.
3. For the special instruction of physicians in

GYNECOLOGY AND OBSTETRICS.

The physicians who have obtained permission to attend the hospital are termed "Externe Hülfärzte," and live in the hospital building.

Permission to secure this position must be made in advance through Prof. Leopold, to the Royal Ministerium of Dresden, and the applicant must give evidence of his being a regular, qualified physician, besides binding himself to carry out faithfully all rules and regulations.

Besides a small entrance fee one is only charged for his board and lodging. There are but eight physicians holding this position at the same time.

The entire management of all departments is under the direction of Prof. Leopold, who has four regular assistants, each of whom has his special department; one is in charge of the gynecological department; another, the pathological and microscopical department; the third, the obstetrical depart-

ment; and the fourth has charge of the women during their puerperium, and the children.

*The duties of the "Externe Hülfsärzte" are to assist at gynecological operations daily from 7 to 10; take clinical histories; to be in charge of the births twice a week for 24 hours; and lastly, to prepare articles, review new works, and also microscopical slides for the Gynecological Society, which meets in the hospital about once a week.

Prof. Leopold is always on hand, and is at all times untiring in his efforts, ever ready to explain or give any desired information, and through his efforts alone this institution is second to none for the special instruction in gynecology and obstetrics.

As soon as a patient is admitted she is given a full bath, and clothed in a simple hospital outfit; if she is in labor, she is removed to one of the two large rooms which are used only during labor, and are employed alternately once every other week, so that in the meantime they can be carefully fumigated and disinfected. Should she not be in labor, she is placed in a wing of the building kept for those cases before delivery.

As soon as the labor is terminated, the patient is put in a fresh bed and carried to another ward reserved for the "puerperium."

Most careful attention is given to the exact and full histories from admission until discharge; the measurements of the pelvis, abdomen, etc., as well as the weight, growth and measurement of the child.

In fact, these histories could not be more complete and satisfactory.

As my idea is to give the most important antiseptic rules in as short a space as possible, I have translated some of the rules, which will convey the idea of how the institution is managed.

GENERAL CONSIDERATIONS.

I. Pregnant women, those in labor and others passing the puerperium, can very easily be fatally infected through a single digital examination.

* Instruktion für die Externen Hülfsärzte, Kapitel I, § I.

II. The most frequent and dangerous agent for carrying infection is the examiner's finger.

III. As the hands are the most useful and best instrument that the obstetrician possesses it is desirous above all things to keep his hands and nails surgically clean.

IV. The external examination of pregnant women (*i. e.*, the palpation of the abdomen) as well as during and after labor reveals all that can be desired in the vast majority of cases, viz., the position, presentation, and progress.

Therefore the physician should refrain as much as is possible from internal or vaginal examinations, and only make one when it is demanded by the welfare of the mother or child.

The foetal heart should be the guide, and should be listened to often and carefully, etc.

*RULES FOR THE ANTISEPTIC MANAGEMENT OF LABOR.

These rules are also in force for operations, examinations, etc.

The physician on duty is not allowed, for forty-eight hours before entering upon his duty-day, to attend autopsies, septic cases, especially the vaginal examination of such cases as cancers; neither is he allowed to do microscopical work during that time.

On the morning of his duty-day he must take a full bath, and an entire change of clothing.

Clothes (woollen) that have been worn at autopsies must never be worn while on duty.

While on duty it is not permissible to examine pregnant women other than those in labor, and under no circumstances patients in the "puerperium"; for this purpose a physician not on duty is to be summoned.

Before entering the "birth room" the physician must remove his coat and bare both arms beyond the elbow, and put on a long cotton mantle previously made aseptic. (These mantles cover the entire person and have short sleeves.)

The nails of the assistants must be worn short, and should he have any cuts, abscesses, sores, etc., he is not to examine. No rings are to be worn.

Before each digital examination the hands and arms of the

*From the "Rules Governing the Assistant Physicians," Kap. B. No. 10 et seq.

examiner must be cleansed in the following manner: 1. All suspicion of dirt must be removed from under the nails, with a knife or point of scissors. 2. The hands and arms must be scrubbed with a brush in warm water and soap for at least five minutes. 3. After the above he is supplied by the nurse with a basin of 1 to 2,000 sublimate solution, 1 part solution 1 to 1,000 and 1 part warm water, using again the brush and soap for three to four minutes. 4. Finally for one minute the careful washing of the hands in a 1 to 1,000 sublimate solution, the hands and arms not to be dried but kept damp.

The lubricant used is a 2 per cent. carbol. vaseline, kept in a porcelain jar submerged in a 5 per cent. carbolic solution.

The external genitalia of the patient are first washed and scrubbed with soap and warm water, and afterward with a 5 per cent. carbolic solution. This is done by the nurse, who has previously washed her hands in the same manner.

The internal examination is made in the following manner:

With the thumb and forefinger of the left hand the labia minora are separated from one another, and the forefinger *alone* of the right hand guided along the posterior vaginal wall to the os uteri.

Only two fingers are to be used in exceptional cases. Examinations are to be done in as short a time as is possible, and care should be exercised not to rupture the "sac" or to bore in the os with the finger.

The hands must be disinfected in the same manner after an examination as before, so as to avoid carrying infection from one patient to another.

No vaginal douche is employed, excepting in instrumental labor or septic births.

In cases of instrumental interference the vagina is to be irrigated with a 1 to 4,000 sublimate solution, or 5 per cent. carbolic solution—depending on circumstances.

Instruments are all first scrubbed with soap and water, boiled and kept in 5 per cent. carbolic solution. After the labor is completed the vagina and the uterine cavity in cases of septic births is cleaned with a solution of 2 to 5 per cent. carbolic solution, kept at a temperature of 40 deg. C.

Such are the most important rules in vogue here, and with

the exact practice of those rules naught save good results can possibly follow.

From the following statistics an idea can be formed of the results obtained.

These statistics are copied from the annual report of the institution.

During the year 1886 there were 1,387 births, 1887, 1,388; and in 1888, 1,369; of these the following operations were necessary:

OPERATIONS.	1886	1887.	1888.
Forceps.....	26	27	52
Turning and extraction.....	31	33	35
Extraction by head or arm.....	49	32	28
Removal of placenta.....	13	8	7
Craniotomy.....	10	16	17
Cæsarian section.....	8	5	10
Artificial induction of labor.....	13	24	12
Abortions.....	9	21	14
Laparotomy for rupture of uterus.....	1		
Puncture of ovarian cyst before labor.....	1		
Embryotomy.....	3		
Reposition of the gravid uterus.....	3		
Sewing of ruptured cervix.....	0	6	14
Sewing of ruptured perineum (severe).....	17	17	18
Total operations.....	201 14.7%	180 13.0%	207 14.9%
TO THIS MUST BE ADDED:			
Eclampsia.....	6	10	10
Placenta previa.....	7	18	5
Contracted pelvis, <i>i. e.</i> , smaller than 9 c. m., antero-post.....	94 6.8%	9%	7.1%
Contracted pelvis (slightly).....	424 30.6%	24.0%	14.4%

Year.....	Number of births.....	DEATHS.					
		Without elevation of temperature.....	Slight fever.....	Discharged before the 14th day.....	High fever.....	Infection puerperal fever.....	
		Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	
1886	1,387	78.4	10.0	89.5	7.8	1.9	14 or 1 per cent.
1887	1,388	82.8	12.8	95.6	3.0	0.4	2 patients=0.14 per cent. 1 patient=0.07 per cent.
1888	1,369	79.0	16.0	95.2	4.0	0.8	1 per cent. 4 patients=0.28 per cent.

SELECTED ARTICLE.

LECTURE ON SCABIES.

Delivered by PROFESSOR FOURNIER, at the Hôpital Saint-Louis, Paris.

[Translated from *L'Union Médicale*, by Henry Wm. Blanc, M. D.]

THE ITCH-MITE DESCRIBED — ITS HABITS — IT IS THE MOLE OF THE SKIN — SYMPTOMS OF SCABIES — THE CUNICULUS, ITS PATHOGNOMIC SIGN — REGIONS ATTACKED BY THE ERUPTION — REGIONS HAVING IMMUNITY — CHARACTER OF ERUPTION — TREATMENT IS PURELY EXTERNAL — CURED BY HARDY IN NINETY MINUTES — METHOD PURSUED AT THE SAINT LOUIS — THEORY OF TREATMENT — OINTMENT OF HELMERICH — BOURNIGNON'S SOLUTION — KAPOSI'S PLAN OF TREATMENT — POST-SCABIETIC PHENOMENA — TREATMENT OF CHILDREN — PROPORTION OF CURES OBTAINED BY METHODS RECOMMENDED.

GENTLEMEN—I desire to speak to you to-day on the subject of the itch, a disease with which every physician should be familiarly acquainted, as an error in its diagnosis subjects the patient to an intolerable existence, and renders him an object of disgust on account of the eruption with which he is covered. Indeed, such an error may be followed by the general spread of the disease, so contagious among persons of the same household. What is of material importance to us is to remember that a failure in diagnosis can throw us into considerable ridicule and do us a great amount of injury. What would be thought, after the real nature of the malady became known, of the physician who had given to a patient having the itch such remedies as the iodide of potassium, mercury or arsenic, or who had sent him to Vichy, to Neris, or to Luchon? Every practitioner, then, should know how to recognize the itch, and should know it well and thoroughly.

The definition of scabies is simple:

It is a disease produced by the presence in the skin of a parasite called the *acarus*, and it is characterized by two kinds of symptoms: intense itching, occurring chiefly at night, and various cutaneous manifestations, the most characteristic of

which is the *cuniculus*. It attacks all classes of people, the scum of humanity and families living under the best conditions. It is extremely common. The number of itch patients who presented themselves at the Saint-Louis during any two years, taken at hazard, will give you an idea of this frequency.

In 1878, some 3,809 came to the consultations; in 1886, 5,987 cases presented themselves. These figures seem to me to dispense with further comment.

What is the cause of the itch? In what does it consist? The cause is a well known animalcule, of the order *arachnida* belonging to the family of *acari*. It was formerly called flesh-worm, or itch-mite. Linnæus has given it the name of *acarus scabei*, and it is also designated *sarcoptes* (*scabei*). The *acarus* is very small, but large enough, however, to be seen without a microscope. Its volume nearly corresponds to that of a small grain of starch.

Viewed through a glass magnifying from fifty to one hundred diameters, we see that the animal has an oval body, the thorax of which is continuous with the abdomen, the head being for the most part included in the line of the thorax; the general appearance resembling that of a tortoise. A convex back, from which project spines or bristles; a flat stomach, to which the reproductive organs are attached; and four pair of legs, arranged in twos, with two pair anteriorly and two pair posteriorly, making eight legs in all. The head is armed with four jaws or mandibles.

The sexes are distinct and it is important to differentiate them.

The female is recognized by two characteristics: its volume, and the structure of the inner hind foot. She is fatter than the male, who is only one-fifth of a millimeter long, whilst her length attains one-third of a millimeter. The front feet of all *acari* are alike, and possess small, cup-like depressions, by the aid of which the animal holds on and walks. In the female the two hind pair are provided with long bristles, but in the male the inner feet of these two pair terminate in sucking disks. Naturalists believe that this arrangement aids the male in seizing the female, thus favoring copulation.

Some words on the habits and customs of the animal.

The acarus is a cutaneous parasite, but does not inhabit the surface of the integument. All its existence, on the contrary, is passed within the interior of the skin; it is the mole of the skin, if I may be allowed the expression. Removed from its natural habitat, it remains quiet and ends by dying.

It is easy to verify, without danger, the manner in which the acarus behaves when it gets upon the epidermis. At first it remains almost immovable, as if uncertain, then stirs about a little, and, finally, when it has found a place which seems favorable to it, rests on its hind feet and takes an oblique position. It then pierces the skin in an oblique manner to the right and left, pressing as it cuts, and, continuing its work without relaxation, finally ends by boring a hole, into which it forces itself, even to the tip of its posterior bristles. This is the time to cause a cessation of hostilities if the disease is to be avoided.

The parasite lodges itself in the deep layers of the epidermis, above the mucous layer and sometimes in it; but avoids carefully the superficial layers where it would find only dead epidermic cells, upon which it can not feed. Having once plunged into the epidermis the animal behaves differently according as it is male or female. The male remains quiet and does not work; the female, on the contrary, bores a regular tunnel, which is found equidistant from the surface of the epidermis and the papillæ of the corium. As she moves forward in her digging she lays eggs in the rear, and this explains the chief diagnostic sign of the disease, the *cuniculus* or *furrow*.

A few words, gentlemen, on the habits of the sarcoptes: It has been said that it is noctambulant, that it is a night-rambler. This is a calumny, for, once in the skin, the animal finds there its subsistence, and remains there. There are no night-ramblers save those which have been scratched out by the fingers. However, they are more active at night than by day. An interne of the Saint-Louis, Aubé, who has made many researches as to their habits has observed that while the sun shines they stir little or not at all, but that they walk during obscurity, and at that time traverse the same ground four times as rapidly.

The duration of the life of the acarus is from about six weeks to two months, and during this time the female lays fifty eggs. Laying begins at the age of fifteen days; and thus the female is a mother at fifteen days, grandmother at thirty, and great-grandmother at forty-five, about the time she reaches the end of her existence. As each female lays her fifty eggs, it is apparent that the multiplication is considerable in a short space of time; and this explains the rapid spread of the itch over the body.

The acarus leads a hard life; when separated from the skin it seems as if dead, but is revived without much trouble. It resists immersion. Experiments have shown that it dies, after immersion in cold water, on the seventh day, and not until ten days when placed in warm water. In a solution of black soap (*sapo viridis*), it lived two, three, and even four days. Fortunately there are certain substances which easily destroy it; these are sulphur, petroleum, spirits of turpentine, etc.

Let us now study the symptoms of the itch, all of which, with the exception of some sympathetic complications on the part of the nervous system, happen upon the skin.

The disease has two great symptoms: itchiness and cutaneous eruption. The cause of the itching is easily found, as the animal lodges itself in the neighborhood of the papillæ of the derma. It is remarkably intense, varying with the age and temperament of the patient. But slightly marked at the beginning of the affliction, it becomes intolerable later on, being most intense among nervous or dartsy patients.

The skin then becomes covered with a variety of lesions, which remain for an indefinite period.

Among the objective phenomena, there are two kinds: the first being the *cuniculus* or furrow.

As you know, gentlemen, there are very few pathognomonic signs of disease. We may cite the crepitation of fractures, the crepitant rales and rusty sputa of pneumonia, but there are not many others to be found. There is, however, for the itch a sign which is possessed by this disease alone—the *cuniculus*.

This *cuniculus* is the external appearance of a tunnel bored

out by the female sarcoptes. It is a little track under the skin, identical in appearance with that which would be produced by the point of a needle; it can also be compared to the tracing produced by a dry pen scratched over a sheet of paper. The cuniculus may present three different colors: it is gray, black, or white. Ordinarily it is gray, appearing as a slate-colored line, more or less dark. Among slovenly people, and workmen whose hands are frequently soiled by the dust of their occupation, it is black.

Finally, in city practice it is white, this being the usual color of the cuniculus among well-to-do persons, that is to say, persons who wash their hands with soap.

Sometimes the shape of the cuniculus is rectangular; commonly it is curved, presenting the appearance of a small comma. The length is usually one, two, or three millimeters, up to six or seven, and even more, since Hebra has seen one which was ten centimeters long. The two extremities of the track of the sarcoptes are remarkable and easy to distinguish. One is called the head, and presents a small, gaping, slashed opening; the other extremity is called the tail, and is a little raised—it is the *acarian eminence* of Bazin. This elevation depends upon the presence of the animal in the blind extremities of the furrow.

It is very easy to make out the acarus on the skin—the furrow is sought and its two extremities recognized, the acarian eminence forming a slight elevation of opaline hue. Then, with a blunt-pointed pin, tear the elevation and rake the skin, as it were, and the acarus will become attached to the pin. In order to examine the cuniculus under the microscope, use scissors which are curved on the flat side, and with them the part attacked may be easily excised without giving the least pain to the patient. We see, then, that the little intra-epidermic gutter contains, first, the acarus, whose head is turned toward the blind extremity of the furrow, then, behind this a quantity of eggs, a half-dozen at least, after which come broken eggs and small black points, which are the excrement of the animal. The eggs placed immediately behind the animal are simply granular in appearance, while in those further back the embryos appear.

The cuniculi are to be encountered upon certain places of election, with which it is very necessary to be acquainted. These are: 1. The hands, on the lateral surfaces of the fingers, and, above all, the digital commissures. 2. The internal surface of the wrist. 3. The penis. 4. The anterior border of the axilla. 5. The umbilicus, and some other points. Among women, after the fingers, the bosom is the most frequent seat of the lesion; among children the palmar surface of the hand. The number of cuniculi is very variable, and in some of the pustular forms of the scabies they are exceedingly rare.

Certain regions of the body are relatively spared by scabies. There are usually very few lesions on the neck, shoulders, back and calf of the leg. The head is respected to such an extent that the face and hairy scalp are absolutely free, but the reason is unknown. Cuniculi have been found upon the chin and forehead, but these are veritable curiosities to be ignored in clinical study.

A few words relative to diagnosis:

This is generally easy, and is made upon the combined symptoms already enumerated. As you know, the disease has a pathognomonic symptom, the cuniculus. It is always necessary to begin by looking for this, for if but one is found it is sufficient for the diagnosis of scabies; it only remains necessary to take care not to confound with the furrow the lines or wrinkles of the skin, and scratches darkened by dust. We will avoid this error by careful observation and by remembering that the furrow is not a simple line, but presents at one of its extremities an opening, and at the other the acarian eminence of Bazin. Unfortunately the discovery of the furrow is sometimes difficult, indeed very difficult, for there are some patients with whom it requires a quarter of an hour, a half hour, or even several hours to find a single one.

I once sought the furrow on an itch patient for an entire year, making examinations for more than a half hour each time, and at one time two hours; weary with the fight, I took the patient to M. Laillier, who ended by finding a furrow after three hours and a half of searching. It is necessary also to know that the furrows may be absent from the hands in certain conditions which I shall enumerate. This occurs in those

whose occupations cause them to put the hands into water, among washerwomen, for example; in those with whom the epidermis is very hard, as among the blacksmiths; and, finally, among persons who handle chemical substances, such as plaster, cement and chemical products in general.

When the furrow is absent from the hand we look for it on the penis, the breasts, the forearms, and the anterior portion of the abdomen. The physician should also inspect the inner border of the foot and all regions where the clothes are tight.

Always seek the furrow, then, but not with absolute strictness, for the discovery is not indispensable to the diagnosis, as in its absence there are numerous signs which are sufficient to determine this.

Intense, persistent itching, and nocturnal exacerbations will furnish you a very useful index. There will be several lesions, two of which are almost pathognomonic; the *miliary* lesion, characterized by small herpetiform vesicles in the commissures and lateral surfaces of the fingers, and that of *scabietic ecthyma* of the feet, hands, elbows and thighs. Variola of the hands, as we are in the habit of saying familiarly here, permits a confident diagnosis of the itch.

There is something still more significant—it is the general march of the disease, the physiognomy of the eruption. This eruption possesses three distinctive characters:

1. It is disseminated, sometimes generalized, and presents a strange peculiarity: the immunity of the face.

2. It is not uniform, that is to say, it appears in certain regions in preference to others. These regions, I recall to you, are five in number: the hand, the penis, the preaxillary region, the thighs, and, finally, among women, the breast. When disseminated eruptions are seen to select these special regions of the body, the itch may be affirmed as the cause.

3. The dermatoses derived from the itch are polymorphous. Call to mind the variety of lesions seen upon the same patient: Papules of all sizes, small, medium and large; vesicles; pustules of every dimension; scratch-marks; and, finally, inflammatory dermatoses, such as lymphangitis and furuncle. Compare this polymorphous affection with psoriasis, for example; the difference is striking to the eye, since the

latter always presents the same eruptive character, while in the itch the lesions are numerous and of different kinds.

The lesions of the itch have, then, a special physiognomy to the practised eye.

I hasten, gentlemen, to give you the treatment of the itch. Any one searching for a disease with which to demonstrate that treatment varies with the times, could not find a better example than scabies. For a long time it was treated by internal medication—by depuratives, though now a physician who would prescribe one of these remedies would make himself ridiculous. It has been demonstrated that no internal medication, whatever may be its composition, is capable of producing the least effect upon the itch, the treatment of which is purely external. This is an established fact upon which further discussion is useless.

I do not pretend to give you here a complete history of its treatment; I simply desire to show you what has been done here at the Saint-Louis, and the practices which have been adopted in consequence of numerous experiments pursued with perseverance, experiments which have produced a complete therapeutic revolution. The old method required several weeks, a fortnight at the least, but Bazin succeeded in greatly abbreviating this duration, and his patients remained in the hospital only four days, then only two days; and finally, Hardy has done even better, for he has succeeded in curing the itch in an hour and a half.

Formerly the many patients who had the itch were domiciled in the hospital; now they are received there only occasionally, for the treatment applied to them is, as they call it, "the scrub." The "scrub" lasts an hour and a half, this time being divided into three stages of a half-hour each; and that is, as I have remarked, all the time that is required. During the first half-hour the patient, entirely stript, is thoroughly scrubbed from head to foot (the former being excepted) with potash soap. During the second half-hour the patient enters a bath and continues to rub himself with the same substance. Leaving the bath, he occupies the third half-hour by rubbing himself with a sulpho-alkaline salve. This being done, the patient dresses himself, the garments being purified, and then returns home, retaining his salve upon him until the next morning. That is all.

The theory of the treatment is easily established: its two first acts are designed to soften and open the furrow, for if the parasiticide be placed upon the closed furrow the parasite will not be attacked. In the third stage something is put in contact with the acarus which kills it.

To produce these rapid results there is one method only, and a serious one, for the treatment is rough, laborious, brutal and quite painful: nay, more, there is a risk of exciting and inflaming the skin and of producing eczematous eruptions which are sometimes very persistent. I therefore think that some milder form of treatment should be proposed. Why is potash soap, which is very irritating, applied? For a very simple reason, because it is inexpensive. As this argument does not apply to private practice you should be careful to use ordinary soap, or powdered soap.

For frictioning the patient the ointment of Helmerich, composed of sulphur, lard and carbonate of potash, has been used. This ointment is much too irritating, so Hardy has modified it in the following manner:

Lard.....	100 grammes.	
Sulphur.....	10 "	(instead of 25).
Carbonate of potash.....	8 "	

Even in this strength the ointment is too strong, and it is necessary to diminish the irritating substances which it contains.

For private practice the following solution from Bournignon may be used:

Glycerine.....	200 grammes.
Gum tragacanth.....	1 gramme.
Flower of sulphur.....	100 grammes.
Carbonate of potash.....	35 grammes.
Oil of lavender,	} aa.....1 gr. 50 centig.
Oil of peppermint,	
Oil of cloves,	
Oil of cinnamon.	

At the Saint-Louis it is customary, when a patient has been rubbed, to cause him to retain his ointment until the next day. This plan is faulty, for the friction of a half hour suffices to kill the acari, and, this being done, I prefer to order the patient to bathe again, and cover himself with starch on leaving the bath, thus avoiding the eczemas consecutive to treatment.

When the patient is cured it is necessary that the parasite should be removed from the garments, for if he continues to use the same clothes, the same linen, he will contract the dis-

ease anew. The placing of the garments in a heating chamber at 100 deg. (centigrade) is sufficient to kill every parasite that can be found in them; but great care should be taken to burn all gloves.

I know, gentlemen, that, in spite of these modifications, the treatment of Saint-Louis has been exposed to the criticisms of a certain number of medical men, notably those who practise beyond the Rhine. In Germany and in Austria scabies is treated slowly. Kaposi cures his male patients in from three to five days, and his female patients in from five to seven days. He does not employ frictioning, nor a bath beforehand, and begins by the application of a sulphur salve; and the patients rub themselves with this two or three times, remaining enveloped in garments or coverings of wool, without being washed. The treatment is afterward continued by the employment of naphthol:

Naphthol, B.....	15 grammes.
Potash soap.....	50 “
Chalk.....	10 “
Lard.....	100 “

This preparation is not removed until the case is complete, which happens in from one to two weeks.

Should, then, the rapid treatment be abandoned? No, gentlemen, I should consider it a serious mistake to again apply habitually the slow plan of treatment. There are two reasons for this; the first is that in spite of all these objections the treatment of the Saint-Louis of the past thirty-eight years, during which it has been applied, has been of an incontestable utility to the Parisian population.

The second is that it would be necessary to change to a considerable extent the budget of the institution of “Assistance Publique,” in order to lodge anew all the itch patients, and, besides, would compel these latter to abandon their work and risk the loss of occupations by which they earn a living for themselves and their families.

Let us then, gentlemen, content ourselves with reforming and ameliorating some of the details of treatment, as I have already tried to do, and consider in what cases this plan will apply, and also in what cases it will become necessary to resort to other practices. Experience has shown that frictioning is bad under two conditions: 1. Among adults whenever there is

an extensive inflammation of the skin with eczema, lymphangitis, or furuncles fully developed. In such cases the application of this method is very painful and increases the inflammatory complications already existing, or provokes new ones. 2. The rapid form of treatment is bad for children, above all when they are very young and still at the breast. It produces in them extensive eczemas, irritates the nervous system, and may cause convulsions.

Great caution is necessary in the treatment of children: begin by giving baths and employing the same means mentioned already for combating the inflammatory phenomena: then, in order to open the furrow, cause frictioning with soap, followed by baths, and finally, after three or four days, prepare two ointments (one to be used in the morning and one in the evening) from the following pomade:

Syrax.....	2 parts.
Olive oil.....	1 part.

This treatment is well borne, and a rapid cure is the result.

I have yet to show you, gentlemen, the secondary treatment of the itch. When the rubbing is over, the patient is not yet cured; he goes away suffering considerably, with a red excoriated scarlatina-like skin, and, if there are no acari any longer, there still remain the lesions of scabies. These latter, which now make him suffer more than ever, are treated as inflammatory phenomena would be, by prolonged baths and the employment, *larga manu*, of starch powder; every evening the whole body is anointed with the glycerole of starch. In a few days a sedative action ensues and the eruption is cured.

As a consequence of the itch, two conditions are frequently observed. The most remarkable is the post-scabietic pruritus, for the patients, suffering as much as before treatment, believe that they are not cured, yet, after examining them with great care, only the vestiges of eczema are found, and it is impossible to discover the smallest furrow. This is a special pruriginous neuralgia, and even dangerous, inasmuch as the patients, having recourse to a second rubbing, only succeed in augmenting their suffering. On an average the post-scabietic pruritus lasts several weeks, sometimes even three months.

A second sequel of the itch, upon which it is unnecessary

for me to dwell, is post-scabietic eczema. After this disease, even when appropriately treated, there sometimes develops an eczema which may prove very persistent and very rebellious. The variety oftenest observed is eczema of the female breast. Finally, it is necessary to recognize the fact that the treatment is not infallible and sometimes miscarries: but complete failures do not exceed the proportion of one in seventy cases treated, according to Hardy. Perhaps a furrow is not broken, or perhaps some ova remain intact, and naturally, in such cases the treatment must be begun anew.

To sum up, gentlemen, an absolute cure of scabies must be the result if the treatment is applied systematically according to the methods which I have laid down for your guidance.

HOSPITAL REPORT AND CLINICAL NOTES.

A CASE OF TETANUS TREATED WITH ESERINE—RECOVERY.

By GEO. H. LEE, M. D., GALVESTON, TEXAS.

[Read before GALVESTON MEDICAL CLUB, August 27, 1890.]

Jennie E., aged 23, married, was brought to John Sealy Hospital May 16, with the history of a suspicious abortion, followed three or four days later by exposure to rain, a thorough drenching, and very imprudent dissipation at a dance. Nine days before admission, just after events mentioned, she developed a stiffness in the muscles of the jaws, which spread to other muscles and increased in degree until on admission she was continually in a condition of opisthotonos. The jaws were tightly fastened together. For several days all her nourishment and medicine had been taken by a tube inserted through the space left by a lost incisor.

The peculiar risus sardonicus was well marked. Every few minutes upon the slightest irritation of any kind the most violent muscular contractions occurred. Her tongue was lacerated, swollen and bleeding from being caught between her teeth. Temperature $100\frac{8}{10}$ deg., pulse 110.

There was a discharge from the vagina which had a very disagreeable odor.

The case had been seen by two of the leading physicians of Galveston and diagnosed tetanus. The House Surgeon, Dr. Wysong, held a similar opinion; and in the surgical service

the same diagnosis was made. Probably because of the fact that just a few days prior to this a negro boy had died in the service of tetanus with whom the bromides, chloral, and gelsemium had been pushed to no purpose, it was decided to use sulphate of eserine in this case, thus following Dr. Thos. Layton, late of New Orleans. This drug was made the basis of treatment, and enough morphia added with the idea of producing rest and relief from pain.

On the 16th of May (day of admission) the first dose, gr. $\frac{1}{2}$ of eserine was given hypodermically at 10 P. M. Morphia, gr. $\frac{1}{4}$, was given same way at 7 P. M.

May 17—Gr. $\frac{1}{10}$ eserine was given at 1, 8, and 11 A. M., and at 2, 5:30, 9:30, and 11:30 P. M. Morphine, gr. $\frac{1}{4}$, was given at 4, 11, 2, and 9:30 o'clock, and gr. ss. at 11:30 P. M. Temperature in morning, 101; pulse, 100; in evening, 101.6; pulse, 106.

Little or no effect noticeable from eserine.

May 18—At 2, 4, 6, 8, and 10 A. M., eserine, gr. $\frac{1}{10}$. At 2, 4, and 8 A. M., morphia, gr. $\frac{1}{4}$, while at 6 and 11:30 A. M., gr. $\frac{1}{2}$ and gr. $\frac{1}{3}$ respectively was given. At 11:45 in forenoon the patient was extremely restless, continually crying out from the painful and uncontrollable contractions. She had rested none all night up to that time in spite of large doses of morphine and eserine.

Hydrate of chloral, \mathfrak{Dj} ; tincture gelsemium, min. xxv; tincture digitalis min. xv were given by the mouth, and afforded some rest. Same dose was repeated at 7:30 and 9:15 P. M. Eserine, gr. $\frac{1}{8}$, was given at 12, 3, and 6 in evening, and at 10 o'clock the dose was increased to $\frac{1}{6}$ gr. Morphine, gr. $\frac{1}{3}$, was administered at 8 and 10 P. M.

Her nourishment consisted of milk, eight ounces, and whiskey, half an ounce, every four hours. Bowels were kept open. Not much change in temperature and pulse. A little more quiet during evening. Some slight effect from eserine noticed.

May 19—Eserine, gr. $\frac{1}{8}$, and morphia, gr. $\frac{1}{3}$, given at 2, 6:40, 9:30, 11:30 A. M., and at 2:30 and 6:40 P. M. At 11:30 in forenoon a dose of chloral mixture above. Temperature in morning 101 $\frac{1}{10}$, evening 100 $\frac{1}{10}$, pulse 112. Patient restless all morning, requiring large doses of morphine, but during the afternoon there was a decided change for the better. At 5:30 P. M. Dr. Chas. C. Bassell, of this city, and the hospital staff assisting, the patient was anæsthetized, the vagina thoroughly douched with a hot 1 to 2,000 solution of mercuric chloride, the os and cervix widely dilated, the uterine cavity scraped out with a blunt curette and washed out with the hot 1 to 2,000 solution, followed by a 1 to 6,000 solution same salt. On exposing the os the fetid vaginal discharge before men-

tioned was seen to come from the uterus. This operation had been discussed when the patient was admitted, but was held in abeyance and was now adopted upon suggestion of Dr. Bassell. The patient rested better during the night, though temperature was $103\frac{2}{10}$ in morning and some warmer next day.

May 20—Gr. $\frac{5}{8}$ eserine and gr. $1\frac{1}{3}$ morphine was given at intervals of four hours during the twenty-four hours. Evening temperature 101.

May 21—General condition improving. Temperature never again above 100. Eserine, gr. $\frac{1}{8}$, was given every four hours—in all gr. i during twenty-four hours—and only gr. 4 of morphine.

Until May 30, gr. $\frac{1}{8}$ eserine was given every four hours hypodermically. Diet carefully regulated, of milk, whiskey, beef tea, and meat juice, nothing else. Improvement steady and satisfactory.

It was carefully noted by the members of the hospital staff and by myself that just before the time for the hypodermic of the eserine the patient became rigid, with jaws tightly fastened, and in much pain from muscle contraction; while in fifteen minutes to half an hour after it was given these symptoms were relieved and she could open her jaws widely.

On the 30th and 31st of May only five hypodermics were given daily (gr. $\frac{1}{8}$ eserine in each), and from then to June 11 only one in every six hours. On the 11th two were given, and from then to the 15th only one daily. Diet as before, with slight increase.

On the 15th and 16th, the patient's general condition being much improved, it was noticed that in fifteen or twenty minutes after the administration of the eserine she developed symptoms of the most decided collapse—marked prostration (so as to render active stimulation necessary), with nausea, vomiting, and purging closely resembling cholera morbus. This was evidently due directly to the eserine, and the drug was promptly discontinued.

All tetanic conditions in the muscles had ceased, the wounds in her tongue had healed, and her appetite was excellent. But the risus sardonius was still noticeable (it is even now apparent), and she had a discharge from the vagina, which subsided under hot antiseptic injections. A few lymphatics of neck were enlarged. She was discharged cured July 12.

This case is interesting:

1. As regards diagnosis:

The symptoms as detailed certainly seem to bear out the diagnosis of acute tetanus.

2. As regards the treatment and, deduced therefrom, the demonstrations concerning the physiological action of the

sulphate of eserine, Morphine, which, when given, was administered in large doses hypodermically, produced temporary and partial stupor, but had no action upon the tetanic contractions aside from what could be traced to the blunting of the sensory nerves, and thus the lessening of external irritation; but where the dose of eserine was sufficient to produce its effect, it thoroughly and promptly relieved the rigid convulsive symptoms and thus the pain. It is also of interest to note that with the subsidence of the tetanic symptoms, the hypodermics of eserine produced its usual physiological effect in the violent symptoms noted; while when suffering from the tetanic condition, large quantities of eserine were exhibited with the most satisfactory, and with no unsatisfactory, results. It is of importance, too, to notice the large quantities (gr. i daily for eight or nine days) of eserine which were necessary and were used.

3. The bichloride douche to the uterine cavity—what relation did it have to the favorable termination of the case? The patient had begun to improve before it was given; yet that improvement continued and was possibly more decided after the douche.

4. There is record of 149 hypodermic injections, and probably this is not all; yet there was never the least inflammation from any insertion of the needle, a fact which is due to the care and skill of the hospital internes, Mr. Grace and Mr. Hendricks, who deserve commendation for their unremitting attention and good judgment in the management of the details of the case.

To the ladies of the training school for nurses much is also due for their intelligent and excellent nursing.

PROCEEDINGS OF SOCIETIES.

SHREVEPORT MEDICAL SOCIETY.

EPITOME OF PROCEEDINGS.

At a recent meeting of the Shreveport Medical Society an interesting paper was read by Dr. J. F. O'Leary, on

“HEPATIC PHLEBOTOMY”

in inflammation of the liver. The subject was comparatively new, and the writer's attention had been directed to the effi-

cacy of this operative treatment, as it were by accident, when, in the summer of 1887 he, in company with the late Dr. D. M. Clay, aspirated an inflamed and greatly enlarged liver for pus, under the impression that the patient was suffering from abscess. After a careful exploration no pus was found, but instead a dark, bloody fluid, not unlike coffee; indeed very much resembling it; so much so that Dr. Clay thought that the stomach had been penetrated, and inquired of the patient if he had taken coffee for breakfast. To this a negative answer was returned. The tissue of the organ was very firm and resisted very considerably the entrance of the instrument. The condition of the patient was bad, and the prognosis deemed unfavorable. An opiate was prescribed and he was left with but little hope of benefit. He spent a restless night, suffered a good deal from nausea, and complained of some tenderness over the seat of puncture, as was found the next day when visited. He, however, began to improve under a tonic treatment, and so continued day by day, and to the surprise of both the physicians, ultimately made a good recovery and resumed his daily work.

The essayist alluded to the generally approved practice of topical blood letting as a means of reducing neighboring inflammation, but deduced from his experience in this case—subsequently substantiated by repetitions of a similar character—that the abstraction of blood from the substance of the organ itself promised and yielded better results than such operations performed upon the superficies of same region. In the former operation not only was local tension directly relieved, but the withdrawal of blood deteriorated by an accumulation of waste tissue, the product of inflammatory action, could not fail to produce a much better effect than could be obtained by phlebotomy in a remote or even adjacent part of the system.

Some time after the above operation the essayist had read in a foreign journal an article from the pen of Dr. George Harley, of England, describing cases similar to the one just detailed, and treated in essentially the same manner, though in some instances much more heroically; the amount of blood being as much as twenty ounces in certain cases, and taken by means of a long trocar instead of an aspirator. Dr. Harley pursued the same line of treatment as did the essayist, and it was Dr. Harley also who gave the name “hepatic phlebotomy” to this operation and which was adopted by the writer in the detail of his cases.

From the results obtained in the case described, taken in connection with others subsequently treated in this city, Dr. O’Leary argued that the abstraction of even very small quanti-

ties of blood, much less than was advised by Dr. H., was attended with most encouraging results. He thought the question of quantity should be determined by the conditions, and must be left to the judgment of each particular operator. From his own experience he would incline to the milder plan, *i. e.*, the abstraction of drams instead of ounces of blood, and the use of the aspirator rather than the trocar.

In the discussion following, Dr. T. G. Ford said that he had never aspirated the liver for blood, or with the object in view discussed by the essayist. He had, however, performed the operation in exploring for pus, and in one notable case that he called to mind, and which he had diagnosed abscess, he had punctured this organ. No pus came, but in its stead a little blood, not exceeding one ounce in quantity. He was much disappointed to see no pus, and deemed the operation a practical failure as far as results were concerned, but in the end was gratified to find that pain had ceased, and that under appropriate constitutional treatment his patient made a good recovery.

Dr. H. C. Coty had had a similar case and similar experience in failing to find pus. The amount of blood extracted was, however, very small, not exceeding one or two drams. Yet his patient seemed relieved by the operation and finally got well. Dr. Coty was not sure whether or not this operation entered as a factor in the ultimate result or not, but was inclined to think it did.

Dr. F. E. Yoakum thanked Dr. O'Leary for the paper he had read. He thought the record a good one, and that the operation promised substantial benefits as a feature of medico-surgical practice.

Dr. J. N. Allen was pleased with the presentation made. He had now under treatment a case in which he would use the operation.

T. J. Allen spoke of the relative novelty of the treatment, the idea being comparatively a new one. He thought, however, the deductions were philosophical and that the indications for practice in this direction were favorable.

Dr. J. J. Scott, the president, asked the essayist whether he would use this operation in acute or chronic inflammation, or for both? Dr. O'Leary replied, in either, but preferably in acute. Dr. Scott expressed some doubt as to its efficacy in the chronic form of the disease.

Dr. A. A. Lyon was much pleased with the plan of treatment. Had not tried it, but was disposed to approve it on general principles. Deemed it entirely safe, inasmuch as in these latter days, we hesitated not to thrust a needle into the system almost anywhere. The heart had been acupunctured. The

hypodermic needle was used in the lung tissue; had himself several times aspirated the urinary bladder, and had often been strongly tempted to puncture the colon to relieve flatulence, which he believed could be done with perfect safety.

In this connection Dr. Ford reminded the society of a notable case some years ago in the practice of the late Dr. Clay, in which he (Dr. C.) performed this latter operation for excessive flatulence with immediate relief and no after ill effects.

Under the head of report of cases in practice Dr. W. M. Abney gave the details of a very serious and apparently dangerous

INCISED WOUND OF THE ABDOMEN,

in the person of a negro man, which occurred some weeks previously in the northern part of the parish. Dr. Wm. Davis, of Plaindealing, La., saw the case with Dr. Abney and assisted in the dressings. The abdomen was opened by a large incision with a knife in the hands of another negro with whom the patient was fighting. The wound had been inflicted seven hours before the arrival of the physicians, who found the patient lying in a helpless condition with a large mass of intestines protruding, covered more or less with dirt and trash, and which on examination were found to be open into the lumen at several points, allowing the contents to escape. These openings were stitched with ordinary surgeon's silk, the mass cleansed as well as possible and returned to the abdominal cavity, the external wound appropriately closed and bandaged, an opiate administered, and the patient left with little or no hope of recovery. No antiseptic precautions whatever were possible under the then existing circumstances. To the great surprise of the surgical attendants he made a good and rapid recovery without a bad symptom, and was virtually well in ten days. This case was reported, not so much as an evidence of skill on the part of the surgeons or as a precedent in practice, but rather to illustrate the astonishing recuperative power of some individuals in the face of most adverse and unpromising conditions.

GUNSHOT WOUND OF THE HEAD.

Dr. J. J. Scott also reported a unique case of gunshot wound of the head, which occurred in his practice two weeks previously. A negro child, seventeen months old, received at point blank range, in the center of the forehead, a bullet from a parlor rifle. On examination a tumor presented at the seat of injury which proved to be clotted blood. Upon its removal a clean-cut hole leading into the interior of "something" was

clearly discerned. The doctor deemed it unwise to make an extensive exploration, and pursued an expectant course in the management of the case. The child seemed to suffer no especial inconvenience, developed no bad symptoms, and at the time of this report was about as well as ever. A. A. L.

ORLEANS PARISH MEDICAL SOCIETY.

MEETING OF JULY 25, 1890.

Dr. Chas. Chassaignac, president, in the chair.

After the usual routine business, *Dr. Michinard* read a paper on

LOCAL TREATMENT OF CHRONIC INFLAMMATION OF THE ENDOMETRIUM.

"Les longs ouvrages me font peur." Thus spoke the immortal La Fontaine. Believing that you, as well as myself, entertain with La Fontaine a dread of long articles, this will be made brief..... Should the efforts to accomplish this object be the cause of certain theories being overlooked, you will have reason to congratulate yourselves.

So many pages of contradictory opinions have been written on the pathology of endometritis, that I will avoid discussion of the subject.

So numerous, so opposite, so timid, so bold and rash, so fruitless, and, at times, so damaging have been the different methods of treatment offered by equally numerous writers, that you will not be burdened with their names or systems. You may do as I have done: buy the works and read them at your leisure. It is proposed to here give my experience only. The treatment that is now practised in my wards and office is one which, while not essentially original, is so to the extent that it is a combination and modification of several known methods. And that about embraces originality to-day—at least in medicine.

The experience which suggested this treatment is one derived from the careful treatment and consideration of about 600 cases. Many of this large number being among the first that were treated did not long remain with me to further brave the ordeal of the application of nitric acid, chromic acid, or the stronger tincture of iodine, which it was my custom then to make. Some of these, who, by means of the records of the history books were traced to their homes, were found suffering from cellulitis, salpingitis, or severe metritis. How fared the others

who were not traced it is impossible to say. Few who weathered the storm of such cauterizations were left with painful and obstinate cicatricial contractions of the uterine canal. Others, it must be admitted, were greatly benefited or cured. But the misfortunes of those who were not relieved necessitated the devising of measures which if not happy in their results, would, at least, leave the patient in no worse condition.

The treatment is as follows: Where acute or chronic salpingitis exists (and this is not an infrequent accompaniment of chronic endometritis, whether resulting from gonorrhœal infection or other causes), it is carefully treated before attempts are made to touch the endometrium.

In nulliparæ the small os externum is cut in four directions with a narrow bistoury; the canal, to a little distance beyond the os internum, is then slightly dilated with Atlee's small dilator. This procedure allows the escape of a large quantity of thick, ropy, slightly bloody mucus, which, accumulating between the internal and external os, gradually expands this portion of the canal, forming a capacious pouch. This mucus, as a rule, is too thick to escape through the small virgin os as fast as secreted, and consequently collects within the canal. Being very tenacious, a certain quantity adheres to the mucous membrane, interfering with the direct application of drugs to the diseased tissues. In my cases, swabbing out the canal with tampons of cotton has proven an unsatisfactory method of cleansing. To attain this object, I have had made the dull curettes which are shown to you. The small one measures about $\frac{2}{16}$ inch, and the large measures only about $\frac{3}{16}$ inch. The shank of this little instrument is made of material which, while pliant, offers sufficient resistance to admit of all necessary force being made to the parts. With this curette the membrane is thoroughly cleared of all adhering mucus. Should bleeding accompany this process the blood is removed with absorbent cotton smoothly wrapped around the ordinary platinum applicator. A second applicator, similarly armed, and saturated with the fluid extract of hamamelis, is then introduced as high as the body, and there left for five minutes. In some patients, a pencil 2 inches long and about $\frac{3}{16}$ inch in diameter, composed of three grains of iodoform and two grains boracic acid, with sufficient cocoa butter and wax, is introduced and kept in place by means of cotton tampons. Both curetting and application are repeated two or three times weekly, care being taken to avoid all treatment five days prior to and five days directly after menstruation. With women who have borne there may be no need of dilating the cervical canal. Under this treat-

ment no unpleasant symptoms have developed, while most excellent results have been obtained in ordinary chronic endometritis.

Where there is slight hypertrophy of the mucous membrane, with enlargement of the papillæ, the small, slightly sharp curettes which are exhibited, and which measure the same as the dull, are used. This instrument is used in my office.

But in those cases following abortion, where there exist "small islands of decidual cells with small-celled proliferations going on around them" (Hart and Barbour), as well as in such associated with troublesome and distressing metrorrhagia, where there is "great hypertrophy of the mucous membrane with increase of all its elements, dilation of the lumina of the glands, enlargement of the blood vessels, and marked cellular infiltration of the connective tissue" (Olshausen), the Roux curette is used, preceded by dilation with Wharton's dilator. In domiciliary practice, the latter cases, for the first two weeks, are treated at their homes, and are required to remain abed at least fourteen days; excepting at the initial application (where carbolic acid is sometimes used), the witch hazel or iodoform pencil is resorted to. Thus far I have had no occasion to regret these procedures. No distressing metritis or dangerous salpingitis has followed.

It will probably be noticed that mention is not made of the familiar vaginal douche, with water as "hot as you can bear it." The vast majority of patients use this method of treatment so bunglingly that I have become discouraged with its use, and now seldom order it, excepting for cleansing purposes.

I have been so disappointed in the results of trachelorrhaphy that, excepting where great hypertrophy exists with the laceration, I no longer press the operation. Only where the displacement of the uterus is backward, a malposition which interferes with the draining of the canal and which encourages engorgement, is the position noticed.

Many of you may not have needed the use of the dull curette; and, more fortunate than myself, may not have had distressing results from the use of the stronger acids or iodine. Some of you may not believe in the local treatment of chronic endometritis. Where the inflammatory symptoms are due to a dyscrasia, I, also, do not believe local treatment beneficial. Some of you may have been getting along so smoothly and successfully that an article of this nature may appear superfluous. I have not been so fortunate. Again, some of you, agreeing with certain recent writers, may not believe at all in the existence of true inflammation of the uterine mucous membrane.

In reply to all these suppositions, I can do no better than quote from Dr. T. G. Thomas: "Truly, experience does not teach to all men the same lessons, though all may strive to read its teachings aright."

DISCUSSION.

Dr. Lawrason, who had been appointed to open the discussion, said he considered Dr. Michinard's treatment efficacious, but thought the benefit was derived from the incisions and dilatation.

If the topical use of drugs is insisted upon hamamelis may be used, as it does no harm; but nitric acid is injurious.

He believes the symptoms of endometritis may be produced by a hyperæsthetic or neuralgic condition of the internal os, causing congestion of the mucous membrane and retention of the secretions. Fissure of anus or hyperæsthesia of the sphincter may, by reflex action, cause such congestion. In these cases, if a finger be introduced into the vagina and pressure made upon the sphincter, the woman will jump or cry out with pain. Such patients are cured by simple dilatation of the sphincter. Electricity is a safe, painless and efficacious method of treating endometritis. By applying the positive pole to the uterus, oxygen, chlorine and sulphurous acid, in the nascent state, are liberated and brought directly in contact with the affected part, acting locally as antiseptics and astringents.

When there is dysmenorrhœa it is well to use the negative pole for a few days preceding menstruation, so as to liquify the membrane and cause it to be easily discharged. He disbelieved in the existence of endometritis without the introduction of septic material from without.

D. Matas said the fact that endometritis is now cured by more conservative treatment, is evidence of the advance made in gynecology during the last few years. During his service as interne of the Charity Hospital he saw many cases treated with nitric acid, none of which were benefited.

Dr. Parham spoke of curing spasm of the neck of bladder, by dilating the urethra and allowing free drainage. We often find spasm of bladder following ligation of hemorrhoids when sphincter is not stretched. Suggests the use of a drainage tube, being introduced to the internal os and allowed to remain in this situation several days, so as to procure thorough drainage.

Dr. Chassaignac considered the harsher methods of treating endometritis, such as the applications of nitric acid, as barbarous, and thought gynecologists had done a wise thing when they abandoned their use; but he attributed much of the success in the treatment of this disease to the increased atten-

tion now paid to the general condition and removal of causes. He thought the tendency of the age was toward exaggerated specialism: specialists, as a rule, pay too much attention to local conditions exclusively, while they are frequently the result of general, systemic conditions, the cure of which should be the most important step; local treatment coming in very well as an adjunct. Thought Dr. Michinard's cases might have been cured both by obtaining drainage, as claimed by him, and by the division of nerve fibers, as affirmed by Dr. Lawrason.

Dr. Parham then reported a case of tonic contraction of the flexor muscles of the third and fourth fingers, resulting from a contusion of these fingers. There was no relaxation during sleep and any effort to extend the fingers caused great pain. Chloroform was administered and fingers relaxed so as to be straightened without difficulty; splints were applied and the fingers kept straight for three weeks, when the splints were removed and all tendency to contraction found to be overcome.

Dr. Matas reported a case of inflammation of the mastoid cells. Suppuration had progressed to such an extent that the mastoid process was a mere shell, that was penetrated without trouble. It was found necessary to remove the mastoid cells and bones of the middle ear. Suppuration was profuse, but patient made a good recovery.

The same gentleman then reported a case of tubular aneurism of the left common carotid. The artery was elongated and of a serpentine shape, curving over to the right side of the neck. When an incision was made and the tumor examined, the carotid was ligated near its origin, and a ligature was also placed around the sac, hoping to cause inflammatory action within its walls. Patient recovered from the operation but tumor still remains.

Dr. Matas also showed another "new aid to anastomosis." It is a segmented rubber plate, supported by a solid catgut ring. Dr. Matas considers this a great addition to the many "aids" recently suggested.

M. J. MAGRUDER, M. D.,
Secretary.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

J. W. HENSON, M. D., REPORTER.

August 12, 1890—Dr. W. W. Parker, President, in the Chair.

The President, Dr. Parker, read a

REPORT OF A POST MORTEM IN A CASE OF OSTEO-SARCOMA.

On the first of January last he saw Mrs. C., aged 24 years (mother of one child of 3 years and now 4 months pregnant), who had been suffering about two years with a tumor in the right groin. It was nearly the size of the fist, hard and painful on pressure. It appeared (small in size) soon after the birth of her child, and was thought by the doctor then in attendance to be an enlarged gland. Not much attention was paid to it then, as it was not very painful. It grew very gradually, and after two or three months she consulted a surgeon, who pronounced it "cancer." This diagnosis shocked her so that she at once took to her bed and commenced taking opium. She remained in bed three months in the greatest distress. She finally took heart and got up and attended to her household duties. Several doctors saw her. The tumor was aspirated, and nothing but blood escaped. Electricity was used on the tumor for some time, and seemed to give great relief, but did not reduce its size. She still continued to take opium.

When Dr. Parker first saw her, she was cheerful and quite active, going about the house, and often on the street, though much emaciated. The tumor had for some time been somewhat at a standstill, and continued so for a good while after he began attendance. The right leg (the right side being the one affected) was not larger than her arm in health—indeed, not so large. The muscles were shrunken and flabby, yet she walked quite well and fast—with a slight limp. The pain was intense down this leg to the heel—sometimes very severe in the calf. She had never been leeches or blistered. The leeching was tried by Dr. Parker, but no good was done; but small blisters, often repeated, gave great relief. There was a distinct aneurismal thrill in the tumor, which *now* filled the iliac fossa, and was as large as the doctor's fist, but oblong in shape—the smaller end downward. The thrill proceeded from an artery running obliquely across the tumor outward.

Dr. Parker (it was now about two months since he first saw the woman) called in Dr. Isaiah H. White to see if this artery might not be tied, thinking it might be feeding the tumor. He thought that at least an exploratory incision would be justifiable, provided the lady passed safely through her confinement. She had now been pregnant six months. She was safely delivered at term of a small but healthy infant—chloroform, whiskey and ergot being used during the labor. The child is still living and growing finely.

Six weeks after her confinement, she rode out (against Dr. Parker's advice), and came home in great pain, and went to bed. So great was the pain that it was necessary to admin-

ister chloroform, as opium would not give relief. She took immense quantities of the former. He forgot to say that about three weeks after her confinement the pain *entirely* disappeared (strange to say). She then stopped the opium and chloroform and had great hopes of complete recovery.

Her appetite, too, became enormous. She ate six hearty meals a day, and would awake at daybreak and demand her breakfast. Her appetite reminded him of some convalescents from typhoid fever. It was surprising to see how rapidly her strength and flesh increased. Her spirits rose to the highest pitch. She was the happiest woman the doctor ever saw. No opiate of any sort was now taken.

But in exactly fifteen days the pain returned with great violence, as stated above, in connection with the drive after her confinement.

Dr. White again saw her with Dr. Parker, with a view to exploring the tumor. They found it had rapidly increased in size since her confinement—had extended downward; the arterial thrill was now more distinct, and other vessels adjacent were enlarged.

After taking into account the uncertainty of the diagnosis, and that it would be necessary to enter the peritoneal cavity in order to thoroughly explore the tumor, both doctors concluded it would not be wise to attempt an operation. The pain increased to such an extent that she sometimes had to take two drams of McMunn's elixir of opium every hour.

From the time she rode out until her death (July 27), she took, in addition to immense quantities of opium, *nineteen pounds* of chloroform. Much of this was wasted, as she often took it herself. Her death was sudden. Upon rising to vomit, she fell upon her pillow and expired without a struggle.

Thirty-six hours after death, in company with Dr. White and Dr. J. Michaux, who had at one time attended her, Dr. Parker laid open the tumor by making two incisions—one over the entire length of the growth downward and inward; and a second (small one) across the first, and running inward. The muscles covering the tumor looked healthy. Upon reaching the mass, he found it impossible, on passing his hand inward, to dislodge it from the brim of the pelvis. It was bound down to the brim as far as the pubis by a dense fibrous tissue, thickened periosteum perhaps. He then withdrew his hand, and passed it outward and backward along the crest of the ilium, coming in contact with an immense amount of diseased bone, which extended backward to the sacrum. In some places he could push his finger through the bone, which was honey-combed. He made an incision into the

tumor, and found part of it soft—not exactly medullary, but not at all scirrhus—and of the color of pale muscular tissue.

As the origin of the disease was now plain, he did not remove the whole tumor. It evidently began in the bone or periosteum. The exciting cause may have been the lady's striking her right groin against the edge of a table about four or five years before the trouble began to manifest itself. The accident produced great pain, which lasted for some time.

Dr. Parker said that he read quite a lengthy paper before the Medical Society of Virginia two years ago against the habit of some excellent surgeons who think it their duty to be frank with these patients, and in this paper he took the ground that their course was always unwise in the case of cancer.

This patient was a beautiful woman, full of life and energy, and lost one or two years of comparative happiness by the announcement of the surgeon that the growth was a cancer.

One gratifying result of this post mortem was that it relieved the minds of the husband and mother of the idea that the patient had been neglected or the case mismanaged. It is doubtful if any operation at any time would have been beneficial in its results.

Dr. Michaux had attended this woman in her first confinement and had her in charge when the tumor first developed. Two and a half years ago, she came to him complaining of pains in the right iliac region before the appearance of the growth. He examined her per vaginam, and by means of bimanual palpation, suspecting some ovarian trouble, but found no enlargement of that organ or other evidences of disease.

The pains from the beginning came on in paroxysms, which, as time and the case advanced, grew more violent, and the intervals became shorter. Then a small nodule appeared in the right iliac region—growing, but not rapidly. The *length* of the pains increased too. Thinking to learn more, he used the exploring needle. He found a very dense tumor—a few drops of blood (nothing else) escaping. He declined to operate, thinking the growth malignant. Being invited by Dr. Parker, he attended the post mortem, and was still more inclined to think it malignant.

EARLY REMOVAL OF SUSPICIOUS GROWTHS ADVOCATED.

Dr. J. N. Upshur thought Dr. Parker's case a very interesting one.

He had read in some journal a report in which the writer advocated the removal of suspicious growths before the appearance of any cachexia or involvement of lymphatic glands.

He would like to know the result of a microscopic examination in Dr. P.'s case.

The symptoms pointed to malignancy, and the character of the growth and its involvement of bone suggested the colloid variety.

He didn't agree with Dr. P. in not telling the patient frankly the prognosis. He thought there was a great deal in the manner of telling.

Break it to the patient so the horror of it all would be taken off.

He had never regretted being frank.

ADENOMA OF THE MAMMARY GLAND.

Dr. Upshur was reminded (by Dr. Michaux's remarks) of the case of a lady whom he had delivered in September last. She had a good labor and a satisfactory "getting up"—except that she had a slight continued fever during the last two weeks of her confinement. She also suffered from sore nipples, for which he had used lead nipple shields. At the seventh week he was called again to see the patient, who was suffering from supposed mammary abscess, due, her mother thought, to bruising from the nipple shields. The doctor thought this impossible, as the metal was too soft. After poulticing, he gave chloroform. Fluctuation being as distinct as he had ever felt, he lanced the breast. To his surprise only a little sanguinolent matter was discharged, and the tissue crackled under the knife like a potato. The absence of pus and the peculiar feel on cutting were both very striking features. The pain and throbbing subsided, and the part not discharging, the poulticing was stopped after a while. The pain and throbbing recommencing, the doctor went through the same process of poulticing and lancing with the same experience, except there was this time some pus. Later still he repeated the above treatment, and this time, upon continuing the poulticing, the place discharged more pus than it had done at all. He stated to the patient's mother that this was not ordinary mammary abscess, but an adenoma, being benign at the time, but that it might in the future degenerate so as to need surgical interference.

After this, under the influence of tonics, the patient's general health improved. He used potassium iodide and fluid extract gentian internally, and 5 per cent. oleate of mercury locally; but not succeeding in reducing the tumor, after fair trial, the treatment was discontinued, and the patient urgently advised not to rub or handle the gland. She was now put on the syrup of lactophosphate of lime with very decided improvement in her general health. The baby had not been weaned from this breast because of the free flow of milk from the

inferior part of the gland, and the fear of abscess in that location; but so soon as the milk could be dried up, the weaning from this breast was done. When the patient passed from under Dr. Upshur's care, she was looking as well as he had ever seen her.

She had subsequently an attack of *la grippe*, and a few weeks later, cholera morbus.

The said patient is now in Dr. Hugh M. Taylor's hands, and he (Dr. Upshur) thought the subsequent history of the case would be of interest to the academy. He had erred (said the doctor) in two points:

First. He believed that if he had stated frankly the probable outcome of the trouble and had advised excision, the woman's life would have been either saved or prolonged.

Secondly. In the light of subsequent history, he believed he erred in lancing the breast, as no good had resulted.

This was a case which illustrated the importance of frankness and early excision. He thought the latter very important in the case of suspicious growths.

SCIRRHUS OF THE MAMMARY GLAND.

Dr. Upshur also referred to an old lady of sixty. She had in one mammary gland an irregular hard lump, but her former physician (now dead) advised her to let it alone, because at that time it gave her no trouble.

Some time ago she sent for Dr. Upshur, and showed him the lump. She complained of trouble in using her right arm, and tenderness of the breast. There were darting pains and *retracted nipple*. The lump was hard and irregular, though not adherent to the chest wall, and presented symptoms of scirrhus. He advised removal. He could not convince her and her friends of the nature of the trouble. He told her frankly if she waited too long it would be too late. [Caution urged in lancing the mammary gland.]

Dr. Parker thought Dr. Upshur wrong in lancing in the first case he reported. This should never be done unless there was absolutely distinct fluctuation. He was suspicious of breast tumors anyway unless he could be absolutely sure of abscess. He thought Dr. Upshur also wrong in telling the patient the diagnosis in the case of malignancy. He had as lief shoot a woman as to tell her she was cancerous. Tell her friends always, but not the patient. Thousands and thousands were made miserable by this practice. He was sustained, said the doctor, by Mr. Locke.

Dr. Upshur stated that the fluctuation was positive and unmistakable. He believed he would be in error to state that

fluctuation and the peculiar feeling in cutting, before described, when taken together were characteristic of malignancy.

Dr. Hugh M. Taylor said the history of the first case reported by Dr. Upshur had been given him just about as the doctor had related it. He refused to say anything about the case, as the patient and friends, being very sensitive, preferred that it should not be spoken of.

THE DIAGNOSIS OF SCIRRHUS OF THE RECTUM IN A CHILD OF 13 YEARS CONFIRMED.

Dr. Michaux referred to the case of scirrhus of the rectum in a child of 13 years, reported by him at the meeting of this body July 8. Since that report he called Dr. J. S. D. Cullen in consultation, who confirmed his (Dr. Michaux's) diagnosis. The growth finally closed up the calibre of the bowel, but the family would not submit to artificial relief. The child died, the doctor thought, more from lack of drainage through the bowels than from sheer malignancy. He had only one action for fourteen days. That was just before his death. It was small in quantity, consisting of a little mucus and blood, with a very small amount of fluid fecal matter. He thought there could now be no doubt as to the malignancy of the trouble.

POINT OF SELECTION FOR MAKING ARTIFICIAL ANUS.

Dr. M. D. Hoge, Jr., had read Dr. Hunter McGuire's report on twenty-one cases of supra-pubic cystotomy, in which Dr. McGuire said, that if he had a case upon which to operate for making an artificial anus, he would select somewhere in one of the recti muscles, near the median line, because he had noticed that the contraction of these muscles tended to close any opening that might be about the location just mentioned. This case of Dr. Michaux would have been a good one for such an operation. The boy's life might have been prolonged if such a step could have been taken after the bowel was closed.

OSTEO-SARCOMA OF THE ORBIT.

Dr. Chas. M. Shields, three months ago, saw a child 18 months old suffering from proptosis of the right eyeball. It began as a drooping of the upper lid. Ptosis soon gave place to protrusion of the ball. At the time he first saw it (five weeks after its commencement), the right eyeball was about three-quarters of an inch in advance of its fellow. The cause seemed to be some growth or enlargement situated about the upper and outer part of the orbit. The said growth or enlargement continued to increase in an upward and outward direction for a period of three weeks, when the doctor advised an opera-

tion. The original trouble seeming as above stated, to be at the upper and outer part of the eye, made him suspect a cancerous enlargement of the lachrymal gland.

He went with an assistant to the patient's home, intending to put it under the influence of chloroform and examine the part, also to draw some fluid from the suspected gland for microscopic examination. He found the child, however, had a fever, and he turned the patient over to the family physician.

In a few days the said physician called in Dr. Shields, who then found that the child had decided meningitis, with high fever and marked opisthotonos. There was also purpura hæmorrhagica over the whole surface of the body. The child died.

The day before death there was a hemorrhage from the nose, which the doctor attributed to extension of the growth into the ethmoid bone.

A post mortem was held. A tumor had begun from the roof at the upper and outer part of the orbit. This fact, and its growing upward and outward, had originated the idea of cancer of the lachrymal gland. The growth extended over into the ethmoid and involved it considerably. He had sent a specimen over to the Army and Navy Bureau for microscopical examination. He had gotten no report. He thought the growth an osteo-sarcoma. The most peculiar feature about the whole affair was the purpura hæmorrhagica over the whole surface of the body.

CORRESPONDENCE.

LONDON LETTER.

LONDON, SEPTEMBER 1, 1890.

The meeting of the British Medical Association at Birmingham last month was somewhat overshadowed by the approach of the great congress in Berlin, but it was by no means the semi-failure which one or two unfriendly critics here tried to prove it to have been. London was perhaps not as largely represented as usual, and medical London is a little disposed to consider itself not only the center but also the circumference of medical Britain. The medical section, which was presided over by Sir Dyce Duckworth, the treasurer of the Royal College of Physicians, did some good work, and the surgical section was largely attended, but the chief successes of the meeting were the obstetric section, in which Drs. Playfair and Bantock opened discussions, and the dermatological section, presided

over by Dr. Jonathan Hutchinson, the retiring president of the Royal College of Surgeons. At the public dinner Professor Astor, of Philadelphia, delivered a capital speech, and Surgeon Parke, of Stanley's expedition, who had just previously received the gold medal of the association, made an interesting but sadly inaudible speech. Surgeon Parke has just been gazetted to the Guards, an extremely agreeable post, which, if he chose, may in time lead to a kind of practice in London as lucrative as it is agreeable.

The Sanitary Institute has also held its congress this year at Brighton; nothing very original was said, but Dr. Poore once more took up his parable against the water carriage of sewage, and Dr. Topley, F. R. S., of the Geological Survey, showed that owing to the pollution of wells by cesspools, and of streams by sewage, the problem of the water supply of English villages was becoming almost insoluble. The task of the rural sanitary reformer of the next generation will be, he thinks, to remedy the evil consequences of the ill considered schemes of this generation.

Dr. W. W. Thursfield, medical officer of health for the county of Shropshire, who was one of the first to contend that diphtheria stands in relation to dampness of habitation more nearly than to bad drainage, again returned to the subject with fresh facts and figures at the sanitary congress. Dr. George Buchanan, the principal medical officer of the Local Government Board, has insisted frequently of late that diphtheria, which used to be mainly a rural disease, is now becoming mainly an urban disease, and this owing not to diminution in the country, but to increase in the towns. This is very well shown by the following table, illustrated from Dr. Thursfield's paper, which no doubt will be published in full in the Transactions of the Institute next year.

	Deaths per million from diphtheria during 12 months ending June 30, 1890.....	Estimated population.....
England and Wales.....	188	29,407,649
London.....	346	4,421,661
Seventy-seven largest towns, excluding London.....	162	7,582,477
England and Wales, excluding seventy-eight largest towns.....	159	17,103,511

The majority of cases of diphtheria no doubt owe their origin to personal or mediate infection, and the germ of the disease hangs

about houses for months and even years. After a series of apparently simple catarrhal sore throats we begin to meet with cases of diphtheria; most of them originate from infection, but Dr. Thursfield believes that some are due to evolution of the disease *de novo*.

"May not all infectious diseases," he asks, "be assumed to be the result by evolution of a specialized disease developed from some one of the numerous systemic disturbances to which from internal derangement or external influence, the human frame is liable? This development, which as a rule presumably requires a considerable period of time and a long series of passages through different individuals to develop the specific disease, appears in the case of diphtheria to attain that end in a very short series under favorable conditions."

However this may be, the important, practical point is that it is damp soils, and especially damp houses, which favor the appearance of diphtheria. Dr. Thursfield makes a good point by observing that apart from site and soil the material of which a house is constructed is an important factor: a porous absorbent stone retentive of moisture, and a hard non-absorbent stone with a low specific heat favoring the deposition of water from the moisture-laden atmosphere of a retentive soil both render houses damp and as a matter of empirical experience peculiarly liable to visitations of diphtheria.

There has been a slight scare about cholera in London. The first case, supposed to be Asiatic cholera, recovered very speedily, and the specific nature of the disease appears to be very doubtful. In another case the man was clearly proved to have died of fatty heart, and never to have presented any symptoms remotely resembling Asiatic cholera. With the advent of cold weather—frosts are already occurring in some parts even of the south of England—the scare will doubtless die away. A special order has been issued to the port sanitary authorities by the central board enjoining special precautions.

Matters are not proceeding quite smoothly at the medical school of Oxford University. Until a few years ago there was practically no provision for systematic instruction in medicine in Oxford, and the department was only formed after a long up-hill struggle. The old school professors, though defeated, are not silenced, and the world has recently been edified by the semi-private publication of a long letter addressed by the Professor of Medicine to a friend, which letter is apparently a covert attack on the Professor of Physiology. Dr. Baurdon-Sanderson, as is his wont, has not replied, but the struggle will go on none the less, and his party, that is to say the party of progress, will doubtless be victorious in the end. It has received a

recruit, who is an army in himself, in the person of Prof. Ray Lankester, appointed substitute Professor of Zoölogy, to fill the vacancy caused by the continued indisposition of Professor Mozeley. He is a modern of the moderns, with a refreshing absence of respect for old fogyism dressed in a scarlet robe, and a little brief authority.

The arrangements for the proposed Pasteur Institute of Comparative Pathology at Cambridge still hang fire, but it is reported that we are shortly to have a complete scheme published to the world. The main difficulty appears to be the question of funds; this, it is said, has been so far overcome that the institute may be started on a small scale. This, however, is not as it should be.

Sir Joseph Lister's address to the International Medical Congress at Berlin, on the present position of antiseptic surgery, is not to be allowed to go unchallenged. Mr. Lawson Tait has announced his intention of replying to his arguments and modest claims in an address which he is announced to give before the East Anglian Branch of the British Medical Association at the end of this month.

The opening of the medical schools in London next month is looked forward to with some anxiety by the bursars of the colleges; the negotiations between the University of London and the diploma granting bodies in London have broken down, and the whole business is in the melting pot again; how soon it will boil over, and what may come forth, no man knows, and this uncertainty is an added inducement for fathers to send their sons to Cambridge, or Manchester, or Durham, or Scotland.

EDITORIAL ARTICLES.

THE LATEST PHASE IN TUBERCULOSIS.

In our last issue we gave a brief summary of a series of very able papers by Heneage and Gibbes that appeared in the *American Journal of the Medical Sciences*. These investigators denied the unity of phthisis, and in the course of their remarks they pointed to the almost complete absence of improvement in our methods of combating phthisis. If, they contended, the bacillus tuberculosis is the only morbid causative factor with which we have to deal, then scientific men should certainly not have failed to unearth some remedy to destroy it. At the recent International Medical Congress, Koch announced that he had discovered something that would in-

hibit the development of the bacilli, both in culture-tubes and in the animal organism. Koch's investigations are not yet completed, but he is not the man to speak hastily, and even a hint from him would carry great weight.

Koch's tests were made upon guinea pigs. These animals are highly susceptible to morbid influences, and quickly manifest the lesions of tuberculosis when tubercular material is injected into them. A substance, therefore, that is capable of rendering the system of the guinea pig refractory to tuberculosis, will prevent the development of the bacilli in the human system. A very important point brought out by Koch's investigations is, that not only is the healthy organism rendered immune against tuberculosis, but that the disease, after becoming general, can be arrested in its onward march without causing any injury to the organism. If the new substance acts upon the human organism as it does upon guinea-pigs, this last point is of paramount importance, for few healthy people will care to prepare themselves against the possible invasion of an insidious foe; but when tuberculosis has declared itself, no one will hesitate to employ the resources made available by the prolonged labors of earnest investigators. Koch has not yet stated what the new substance is; we can only hope that his labors will be quickly brought to completion, for a year's delay, while it is as nothing in the history of medicine, means certain doom to about 5,000,000 persons—for that is the number of persons annually swept away by consumption.

If the Tenth International Medical Congress had produced nothing more than this declaration of Koch, it would still be entitled to rank as the most beneficial gathering of the sort that has ever been held,

Koch, however, is not the only one to claim that tuberculosis can be modified or arrested. There are hundreds of indefatigable students of tuberculosis; and among this vast army of scientists it is not very astonishing to find that two or more should happen to hit upon the same lines of investigation. While Koch was pursuing his labors, Grancher and Martin, of Paris, were also seeking for something that would enable them to stay the progress of tuberculosis. They used rabbits in their experiments, and in time succeeded in

giving the animals more or less prolonged resistance against experimental tuberculosis, and in rendering them immune against the disease.

These gentlemen had not finished their investigations when Koch made his declaration; this induced them to publish the results of their labors before they had intended.

Grancher and Martin have been more communicative than Koch in regard to their methods of investigation. They made intravenous inoculations of tubercular materials, which invariably produced a rapid and fatal tuberculosis. This furnished a basis or standard for testing the efficacy of methods of combating tuberculosis. They carried out the plan of Pasteur in dealing with hydrophobia, namely, to obtain by cultures a graduated virulence or a complete loss of virulence. The most virulent culture is called number one; and the cultures then decrease in virulence up to number ten, which does not affect rabbits.

Culture number one injected into a vein in the ear causes death in about twenty-three days. When feeble cultures are injected, the rabbit acquires a certain resistance to the disease. Culture number six is injected into the ear, and in one week culture number three is injected, and repeated in nine days. Culture number two is injected two weeks later. If the inoculations stop at number two, the animals may live for months; but if the most virulent culture, number one, be injected, the animals die, but not as quickly as the test rabbits do, and not with such severe lesions as the latter animals always present.

Grancher and Martin have not yet succeeded in completely preventing the development of tuberculosis in the animal organism; but the measure of success that they have already acquired shows that they are on the right road to the solution of a question beside which all others are dwarfed into insignificance.

QUININE ERUPTION—A PECULIAR IDIOSYNCRASY.

The following letter from a well known southern practitioner will be of interest to all medical men practising in malarious districts. We thank Dr. Lanneau for the kind words that he has for the JOURNAL:

Editors New Orleans Medical and Surgical Journal:

DEAR SIRS—A case came under my observation this morning which I beg leave to report, for the members of the family of the lady for whom I had prescribed were greatly alarmed after she had taken the medicine, fearing that something wrong had been administered.

Mrs. W. M. H., a perfect blonde, æt. about 23, and suffering from a severe catarrh, was given ten grains of the salicylate of cinchonidine in combination with five grains of Tully's powder (*pulvis morphinæ comp.*) Shortly after taking this dose the most intense urticaria was developed, which lasted for several hours before the distress which it caused was relieved. As I do not recall any case in which this medicine has produced such unpleasant symptoms, it may not be out of place to direct the attention of my medical brethren thereto. Unfortunately, in cases of peculiar idiosyncrasy, we are unable beforehand to know when and where certain remedies act unfavorably upon the patient. With regard to the one which produced such unpleasant results in the case here stated, I fancy that where quinine is badly borne the same might be found to obtain with the salicylate of cinchonidine, and it would, perhaps, not be amiss to make a mental note of this.

Please allow me again to congratulate you upon the growth and success of your JOURNAL. On looking at the first numbers, which I have, dating back to 1885, one easily sees what strides it has made, both in bulk and subject matter, and I reckon it now as among the best of the various journals which I receive. Yours, very truly,

C. B. LAMNEAU, M. D.

Charleston, S. C., September 15, 1890.

REPORT OF TENTH INTERNATIONAL MEDICAL CONGRESS.

It was stated in the September number that we would begin with the October issue, a series of articles from our own correspondent, giving a well digested summary of the proceedings of the Tenth International Medical Congress. We regret to announce that the initial instalment arrived too late for the present issue; it will appear in the November number.

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

SURGERY.

THE NECESSARY PEROXIDE OF HYDROGEN.

Read in the Section of Surgery and Anatomy, at the Forty-first Annual Meeting of the American Medical Association, held at Nashville, Tenn., May, 1890.

By ROBERT T. MORRIS, M. D., of New York.

Stop suppuration! That is the duty that is imposed upon us when we fail to prevent suppuration.

As the ferret hunts the rat, so does peroxide of hydrogen follow pus to its narrowest hiding place, and the pyogenic and other micro-organisms are as dead as the rat that the ferret catches, when the peroxide is through with them. Peroxide of hydrogen H_2O_2 in the strong 15-volume solution is almost as harmless as water, and yet, according to the testimony of Gifford, it kills anthrax spores in a few minutes.

For preventing suppuration we have bichloride of mercury, hydronaphthol, carbolic acid, and many other antiseptics, but for stopping it abruptly and for sterilizing a suppurating wound we have only one antiseptic that is generally efficient so far as I know, and that is the strong peroxide of hydrogen. Therefore I have qualified it, not as "good," not as "useful," but as "necessary."

In abscess of the brain, where we could not thoroughly wash the pus out of tortuous canals without injuring the tissues, the H_2O_2 , injected at a superficial point, will follow the pus, and throw it out, too, in a foaming mixture. It is best to inject a small quantity, wait until foaming ceases, and repeat injections until the last one fails to bubble. Then we know that the pus cavity is chemically clean, as far as live microbes are concerned.

In appendicitis, we can open the abscess, inject peroxide of hydrogen, and so thoroughly sterilize the pus cavity that we need not fear infection of the general peritoneal cavity if we wish to separate intestinal adhesions and remove the appendix vermiformis. Many a patient, who is now dead, could have been saved if peroxide of hydrogen had been thus used when he had appendicitis.

The single means at our disposal allows us to open the most extensive psoas abscess without dread of septic infection following.

In some cases of purulent conjunctivitis we can build a little wall of wax about the eye, destroy all pus with peroxide of hydrogen and cut the suppuration short. Give the patient

ether if the H_2O_2 causes too much smarting. It is only in the eye, in the nose and in the urethra that peroxide of hydrogen will need to be preceded by cocaine (or ether) for the purpose of quieting the smarting, for it is elsewhere almost as bland as water.

It is possible to open a large abscess of the breast, wash it out with H_2O_2 and have recovery ensue under one antiseptic dressing, without the formation of another drop of pus.

Where cellular tissues are breaking down, and in old sinuses, we are obliged to make repeated applications of the H_2O_2 for many days, and in such cases I usually follow it with balsam of Peru, for balsam of Peru, either in fluid form or used with sterilized oakum, is a most prompt encourager of granulation.

If we apply H_2O_2 on a probang to diphtheritic membranes at intervals of a few moments, they swell up like whipped cream and come away easily, leaving a clean surface. The fluid can be snuffed up into the nose and will render a fetid ozæna odorless.

It is unnecessary for me to speak of further indications for its use, because wherever there is pus we should use peroxide of hydrogen. We are all familiar with the old law, "*Ubi pus, ibi evacua*," and I would change it to read, "*Ubi pus, ibi evacua, ibi hydrogenum peroxidum infunde*." That is the rule. The exceptions which prove the rule are easily appreciated when we have them to deal with.

Peroxide of hydrogen is an unstable compound, and becomes weaker as oxygen is given off, but Marchand's 15-volume solution will retain active germicidal powers for many months, if kept tightly corked in a cold place. When using the H_2O_2 it should not be allowed to come into contact with metals if we wish to preserve its strength, as oxygen is then given off too rapidly.

H_2O_2 must be used with caution about the hair if the color of the hair is a matter of importance to the patient, for this drug, under an alias, is the golden hair bleach of the *nymph's* *dispare*, and a dark-haired man with a canary-colored moustache is a stirring object.—*Journal of the American Medical Association*.

TREATMENT OF STRICTURES BY LINEAR ELECTROLYSIS.

Dr. Fort, of Paris International Medical Congress, read a paper on the treatment of strictures by linear electrolysis. This surgeon has operated on 700 strictures of the urethra without a single fatal result by means of electrolysis.

By means of the electroleur, an instrument invented by Dr. Fort, the operation when properly done is innoxious, without pain or blood, and no bougie is needed afterward. Dr. Fort was the first to apply linear electrolysis in cases of œsophageal obstruction. He related the remarkable case of a young girl having so narrow a constriction that she was unable to swallow anything beyond a few drops of liquid.

At the time she was at the point of death. A month afterward the disease was cured. After fifteen applications of the electroleur she was able to eat all kinds of food and her weight increased twenty-five pounds during that time.

The conclusions of the author are as follows:

1. Linear electrolysis may be used for all kinds of strictures.
2. Owing to the simplicity and harmlessness of this operation and owing to the greater infrequency of relapses by this than by other methods, we think that linear electrolysis should be preferred to urethrotomy and should constitute the operation "par excellence" in the treatment of stricture of the urethra.
3. Combined with dilatation linear electrolysis gives excellent results in the treatment of strictures of the œsophagus. It certainly benefits organic strictures and it cures almost immediately fibrous or cicatricial strictures, provided that a small bougie be used to guide the electroleur.

THE VARIOUS METHODS OF TREATING ERYSIPELAS.

1. *Rosenbach's*: Wash affected and surrounding portions of skin with soap and water, then apply each day a 5 per cent. solution in absolute alcohol. Results, very brilliant as regards both the progress of the malady and the febrile phenomena. The use of alcohol by itself has produced favorable results.

2. *Nolte's*: The affected parts and surrounding skin are covered twice daily with mucilage of gum arabic, mixed with from 3 to 5 per cent. of carbolic acid. Good results. Dr. Ebstein mixes the carbolic acid with vaseline.

3. *Koch's*: With a soft brush a thin and regular covering of following pomade is applied:

R	Creoline	1
	Iodoform	4
	Lanoline	10

The parts are covered with rubber tissue. This has given good results, especially in erysipelas of face and head.

4. *Method of Nussbaum and Brunn*: Ichthyol with or without collodium. Results favorable and very prompt.

5. *Method of Hallopeau*: A solution of 1 to 20 of salicylate of soda is soaked in a mask of several thicknesses of linen and applied over the parts, after which it is covered with rubber tissue to prevent evaporation. Relief almost immediate; cure in from three to five days.

6. *Method of Hueter*: Injections of carbolic acid in the healthy skin, in doses of from ten to fifteen grams, distributed in several punctures, at one or two centimeters from the edges of the affected parts, with the following solution, recently prepared:

R Carbolic acid (pure), absolute alcohol.....aa 3 grams.
Distilled water 94 “

Very painful. Only applicable in severe cases of the head or face.

7. *Method of Kraske*: Scarify the edges before the application of the antiseptic substance.

[The Kraske-Riedel method consists in making a zigzag line of incisions from erysipelatous area into the healthy skin, then repeating this zigzag in opposite direction so as to form a series of rhomboidal figures bounded by the incisions.—Eps.]

Dr. Lauenstein advises that the incisions should be made exclusively in the healthy skin.

8. *Method of Wölfler*: Mechanical compression by means of adhesive strapping applied on the healthy skin at the borders of the affected parts, so as to completely surround them.

[Dr. Kroll suggests rubber tubes or bands to take the place of the adhesive plaster, which would certain seem much more effective.—Eps.]—*Le Bulletin Medical, Toledo Medical Compend.*

[Of all these methods the Kraske-Riedel would seem to be the most thorough and reasonable, since here two antiseptic trenches must be crossed by Fehleisen's streptococcus before the disease can be conveyed higher up.—Eps.]

MEDICINE.

SECTION OF INTERNAL MEDICINE.

INTERNATIONAL MEDICAL CONGRESS.

[From the *Deutsche Medizinal-Zeitung*.]

FORMATION OF GALL STONES.

Dr. Naunyn, of Strassburg, said that the mucous membrane of the biliary passages, particularly that of the gall bladder, is exclusively concerned in the production of gall-stones. The

idea that the constituents of the gall stones have simply been precipitated and become crystallized is erroneous. The complete gall-stones are, in the majority of cases, metamorphoses; they have a well characterized nucleus, and around this a comparatively thin laminated husk. During a certain part of its development, the nucleus is of pap-like consistence. In this pap, masses of cholesterin continually crystallize, infiltrate the mass, crowding out the rest of the concretions as they grow, and a typical gall-stone is the final product. The cholesterin arises from the diseased portions of the bile.

TREATMENT OF GALL STONE.

Dr. Harley, of London, demonstrated his method of removing all kinds of biliary concretions from the gall bladder. The patient is placed on his back, and gradually increasing pressure is made with the hands upon the fundus of the distended gall bladder, through the abdominal walls. As a demonstration of the striking success of the method, Harley exhibited different calculi which he had pressed through the common bile duct; one of these calculi was half an inch in diameter. The stones appear in the evacuations, forty, twenty or even ten hours after the employment of the so-called "digital manipulation," and, of course, after a single application. Such cases, however, are unusually favorable.

The proof of the actual passage of such concretions into the intestines lies in the fact that the previously distended gall bladder at once begins to decrease rapidly in size; and a large amount of bile appears in the stools, whereas before not a trace of it was present. The yellowish discoloration of the skin also disappeared in the same surprising manner. Harley's method is an imitation and a furtherance of nature's own efforts to dislodge the foreign bodies. However, we should not resort to compression if we suspect that the attempt to expel the concretions from the gall-bladder would cause ulceration.

HYPERTROPHIC CIRRHOSIS OF THE LIVER.

Rosenstein, of Leyden, has often had opportunities of observing cases of hypertrophic cirrhosis of the liver in Holland. He has become convinced that the disease of the liver, which consists in enlargement of the organ due to hypertrophy of the connective tissue, accompanied by jaundice, should be regarded as *sui generis*, and does not, as most authors assume, represent the first stage of atrophic cirrhosis. In fact, no well authenticated case of diminution of a really enlarged liver to the atrophic form has ever been observed. True hypertrophic cirrhosis of the liver is accompanied by icterus from the be-

ginning, and appears exclusively between the twentieth and fortieth year of life, while atrophic cirrhosis appears only after the fortieth year. Rosenstein has never seen alcoholism give rise to hypertrophic cirrhosis; malaria, however, may be an infectious cause; the enlarged spleen indicates the latter cause. The spleen may also finally retract, but this is due to the elastic, retractile connective tissue.

The absence of icterus in atrophic cirrhosis is explained by the fact that all alterations of the connective arise from degeneration of the parenchyma of the liver; the secretion of bile is diminished beforehand. On the other hand, in hypertrophic cirrhosis there is an excessive secretion of bile, so that the biliary passages are unable to accommodate the overflow; as a result, icterus exists from the beginning of the disease.

Dr. Litten, of Berlin, said that acites and icterus in hypertrophic cirrhosis are so characteristic that they might serve to differentiate it from atrophic cirrhosis.

Dr. Bäumlér, of Freiburg, found that in all of the cases of hypertrophic cirrhosis of the liver observed by him the patient either succumbed to miliary tuberculosis, or that this latter contributed chiefly to the fatal result. A microscopic examination of the liver revealed places with cellular infiltration, as in miliary tuberculosis. When animals are inoculated with tubercular material, interstitial hepatitis arises. Perhaps tuberculosis predisposes to hypertrophic cirrhosis, or it may be the etiological factor.

TREATMENT OF DIPHTHERIA IN AMERICA.

Dr. Jacobi, of New York, claims that the false membrane is the characteristic mark of diphtheria, and the different microbes found in connection with diphtheria do not indicate differences in the character of the disease. The European and American diseases are identical in character, although former microscopical investigations pointed to an opposite view.

Prophylaxis is much more written about and better practised in America, than in Europe. The health authorities of the United States have, both in cities and States, informed the people, through pamphlets, of the danger of infection, its prevention, and the necessity of isolation, disinfection, and how to protect schools. The sanitary regulations of New York are, in this respect, worthy of all praise. Every case of diphtheria is published, investigated, disinfectants are furnished, and stores are closed when necessary. Transportation to the special hospitals is furnished free of cost.

Intelligent practitioners pay regard to personal precautionary measures, such as disinfection of the mucous membrane of

the mouth, excision of hypertrophied tonsils, etc. Experience has shown that very many cases of follicular tonsillitis are actually mild cases of diphtheria, especially in adults, and that this is just as contagious as the most pronounced form of the disease in children. Chlorate of potash is employed to protect the healthy mucous membrane of the mouth and restore the diseased portion. Chloride of iron (tincture) is given for its anti-fermentative and astringent effect; it is given in small and frequent doses, so that a child of one year takes from forty-five to sixty minims a day in twenty or forty doses.

The local treatment of the diphtheritic surface is done chiefly with tincture of iodine, iodoform in powder or salve, or bichloride of mercury; also, with solution of bromide, salicylic acid, calomel, and subnitrate of bismuth. Gargles and, more frequently, nasal injections are employed, because they reach the endangered parts of the pharynx better and are well borne; and together, because the complication of pharyngeal with nasal and post-nasal diphtheria is quite usual in America. Nasal diphtheria, however, undergoes no improvement without frequent injections of mild, neutral, astringent, disinfecting solutions, which should always be warm when used. Such injections are specially indicated when the disease is complicated with cervical adenitis and periadenitis. Conjunctival diphtheria is treated with ice and concentrated solution of boracic acid.

The internal treatment of diphtheria consists chiefly in the administration of tincture of iron and chlorate of potash, usually in glycerine and water. But in laryngeal diphtheria this form of medicine is without effect, as it is also in cases of sepsis with nasal diphtheria and septic adenitis, in which alcohol in the form of brandy, whiskey or wine, very much diluted, but in large doses, is to be given. In fact, the most unpromising cases are sometimes brought to a successful issue with the alcohol treatment alone. If the physician wishes to make sure, he had better give alcohol from the very beginning; it is impossible to give too much of it. Fifty or a hundred grams may be given daily with advantage, and without any danger of intoxication. When the patient can not, on account of irritable stomach, take chloride of iron and alcohol at the same time, the former should be suspended. Not infrequently feebleness of the heart unexpectedly sets in, and then stimulants are usually too late. Cardiac tonics should be given, such as coffee, caffeine, digitalis, strophanthus, spartein, camphor; often these have to be administered hypodermically. Strychnia is frequently used with advantage, and is indispensable in diphtheritic paralyses. In very severe cases, for instance, in

respiratory paralysis, it should be given subcutaneously in frequent and large doses.

In regard to mercurial treatment in many cases of laryngeal and bronchial diphtheria, calomel or corrosive sublimate (1:6000 or 8000) is given with success. A child of one year can take two or three centigrams daily, in doses of one milligram. In cases of sepsis this treatment finds many advocates. The American cases of croup are almost always combined with common diphtheria. Since the introduction of the mercurial treatment, there has been a notable increase in the number of cases that have been cured without tracheotomy, and a greater proportion of those operated on has recovered.

O'Dwyer's intubation is bloodless, and quickly and easily performed; and it is supplanting tracheotomy to a great extent. The results from intubation are at any rate as good as those from tracheotomy.

Jacobi referred to the little used vapor inhalations of carbolic acid, turpentine and eucalyptol, and remarked that the internal use of turpentine, like that of pilocarpine, had found few adherents.

In every case of diphtheria, isolation should be enforced; liquid food and stimulants should be given, and absolute rest ordered; also the nasal injections should be given in the prone or semi-prone position; and complications, like albuminuria, nephritis, etc., should be carefully watched.

INTRAVENOUS INJECTIONS OF QUININE IN MALARIA.

Baccelli publishes (*Berliner klinische Wochenschrift*, June 2, 1890) an interesting communication on the intravenous injection of quinine in malaria. Believing that if the specific medicament was brought into direct contact with the blood cells the destruction of the parasite would be accomplished more quickly and more permanently, he undertook a series of investigations to determine the following points:

1. The minimum dose which is required for complete and permanent cure.
2. The proper moment for the use of the medicament to prevent the paroxysm, to restrict it as much as possible, or to prevent a return.
3. The histological modifications brought about in the blood, already altered by the infection, through contact with the medicament.

In medical literature he found no example of injection of quinine into the vessels for therapeutic—that is to say, for anti-malarial—purposes, although many physiologists had practised

this expedient for purposes of investigation. The latter had, however, used acid solutions, and the author's investigations upon animals led him to believe that such solutions are extremely dangerous. Under these circumstances he employed a neutral solution of quinine hydrochlorate in distilled water with the addition of sodium chloride, to obviate the destructive action of the water upon the red blood cells. The formula is as follows: •

Quinine hydrochlorate	1.00 gramme (15 grains):
Sodium chloride	0.75 " (11½ grains).
Distilled water	10.00 grammes (2½ drachms).

This solution is perfectly clear if employed lukewarm.

Having ascertained from repeated experiments that doses of five and ten centigrammes were perfectly harmless to guinea pigs, the author employed the same doses upon man. After the veins of the forearm had become turgid, as the result of compression with a circular bandage above the elbow, he injected the solution with a Pravaz needle, inserted from below upward into the interior of one of the smallest veins, and immediately removed the bandage. The most rigorous antiseptis was observed, the solution being filtered and again boiled. The injection was made slowly, in order to observe that no swelling of the subcutaneous tissue took place, and, therefore, to be sure that the needle was in the interior of the vessel. The point of puncture was closed with collodion.

With the exception of one case, in which a number of abscesses developed, no injurious local effect resulted in any of the experiments. In two cases in which the needle was not properly inserted into the interior of the vessel, and in which the solution was therefore partially injected into the subcutaneous tissue, there was œdema of the arm, but no other evil consequences. With doses of from ten to thirty centigrammes, no noteworthy physiological effects were observed. After the employment of from thirty centigrammes to one gramme, in three cases some of the characteristic symptoms of quinine intoxication immediately developed, namely, bitter taste, vertigo, loss of consciousness; at first a small and infrequent, afterward a fuller and slower pulse-beat, and coldness of the skin. In general this condition disappeared in from fifteen to twenty minutes. In but a single case was cardiac weakness prolonged for several hours, so that the employment of cardiac stimulants became necessary. The usual dose of the quinine solution was from forty to sixty centigrammes. The results were good in so far as that, in many cases, the fever was at once brought to an end; and, if this were not done, there was always produced a diminution of the temperature succeeding the injection, frequently as much as 2 deg. C. With doses of

one gramme, in none of his patients was there a genuine recurrence of the attack under eight days. The author believes that when there is no idiosyncrasy against quinine, as much as three grammes of the solution can be injected into the veins without danger.

The great value of the method is in pernicious fever, for in other case of malarial fever the ordinary methods of administration of quinine are usually efficient. In pernicious fever, one gramme of the solution should be the tentative dose. Of this form, five cases were treated by Baccelli with good results. Of these, three were of the somnolent variety, one was associated with hemiplegia, and one with bulbar symptoms. In addition to the quinine injections, analeptic and cardiac remedies were administered, especially repeated injections of ether in large doses—five to ten grammes in twenty-four hours. The effect of the specific treatment in these cases was shown rather by the disappearance of the dangerous symptoms than by reduction of temperature, for in such cases temperature is frequently moderate, or even remains normal (*larval malaria*). In general, the following results were noted: The injections did not prevent or modify the fever paroxysm, if made at the acme, at the beginning, or even as many as three hours previous to the access. If made at the end or during the decline of the paroxysm, the succeeding paroxysm was either entirely prevented or much reduced in intensity. In the sub-continued forms of fever, which are usually rebellious to medication, it was found useful to make the injection during the period of remission, the effect being to transform the type into that of an intermittent, usually with an accelerated crisis.

We would especially call the attention of practitioners, in the western and southern states of the Union, to this important research, which seems to furnish them with a better method of combating the pernicious forms of malarial infection than has yet been at command.—*Medical News*.

HYDROPHOBIA.

Following is the report for July and August of the Chicago Pasteur Institute for the preventive treatment of hydrophobia, in charge of Dr. A. Lagorio:

Since the inauguration of the institute, July 2, there have been treated to date twenty-four persons. Thirteen have been admitted in July and eleven in August. Sixteen were males and eleven females. The youngest patient was four years old and the oldest fifty-five years.

Sixteen came from Illinois, two from Indiana, one from Ohio, three from Iowa, one from South Dakota, one from Arizona.

One patient was bitten by a skunk, two patients by a cat and twenty-one by dogs.

Eight patients were bitten on the hands, two on the face, and fourteen on the body and limbs.

Twelve patients were bitten by animals recognized to have been mad by the symptoms shown during life, and twelve patients by animals suspected of having been mad.

Eight patients had their wounds cauterized with lunar caustic, three with carbolic acid, one with potassic hydrate, one with ammonia, and eleven were not cauterized.

To nine patients was given the simple treatment of ten day's duration, with one inoculation daily.

To fifteen patients the modified intensive treatment of fifteen day's duration, with two inoculations daily. Rest on the sixth and twelfth day.

The time which elapsed between the date of the bite and commencement of treatment was as follows:

One day in three patients.

Two days in three patients.

Three days in three patients.

Four days in four patients.

Five days in one patient.

Six days in two patients.

Seven days in one patient.

Nine days in two patients.

Twelve days in one patient.

Three weeks in one patient.

One month in two patients.

One year, two months and
fourteen days in one patient.

Once the brain of a suspected animal was brought to the institute and two rabbits were inoculated with it, but the result being negative the patient was not treated.

Over sixty persons were declined treatment, as not reasonable evidence was produced to show that the animals were mad or even suspected to be so.

Every patient tolerated the inoculation perfectly well. Not a single accident has occurred in any patient during treatment, and all left the institute in perfect good health.

THE PROPER TIME TO ADMINISTER QUININE.

Charpentier gives the following directions as to the use of quinine:

1. The action of quinine is chiefly felt about six hours after its ingestion, and for this reason it should be given, not at the time of an expected malarial paroxysm, but six hours before.

2. In the case of quotidian fever the quinine should not be given six hours before the chill, but eight hours before, so that

the full effect may be present two hours before the chill, for though the chill is the apparent onset, the real onset is still earlier.

3. When the fever is tertian, Charpentier thinks that the quinine should be used twelve hours before, and where it is quartan, eighteen hours before the attack is expected.

The drug should be given in massive doses, for the reason that it is rapidly eliminated by the urine, and in small amounts would have no effect, although when the stomach is too irritable to stand heroic amounts, fractional doses should be given every three-quarters of an hour.—*Am. de Thérapeutique Médico-Chirurg.* *Medical News.*

TREATMENT OF ACNE.

In the *Revue Thérapeutique Médico-chirurgicale*, Isaacs recommends the following for acne:

℞ Camphor, vaseline, beta-naphthol.....	aa 150 grains.
Precipitated sulphur.....	1½ ounces.
Green soap.....	½ ounce.
Mix.	

Apply to the affected parts for from three to fifteen minutes, according to its susceptibility. After using this lotion, use in its place, after thoroughly drying the skin:

℞ Resorcin, Salicylic acid	aa 7 to 15 grains.
Oxide of zinc.....	30 grains.
Vaseline.....	6 drams.
Mix.	

This is to be allowed to remain on all night, or less time if it is too stimulating, and is in itself to be followed by an emollient, such as cold cream or chalk powder.—*Medical News.*

PRESCRIPTION FOR FLATULENT DYSPEPSIA.

Dr. Paul Chéron prescribes the following powder in cases of flatulent dyspepsia:

℞ Magnesia, calcium phosphate, powdered charcoal, sulphur.....	aa equal parts.
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A teaspoonful to be taken in water when necessary.—*Provincial Medical Journal. Medical News.*

BOOK REVIEWS AND NOTICES.

Essentials of Anatomy and Manual of Practical Dissection, together with the Anatomy of the Viscera. Prepared especially for Students of Medicine. By Charles B. Nancrede, M. D. Philadelphia: W. B. Saunders, 1890.

This is a very useful book. On former occasions we were not disposed to view the small quizzing manuals for students with favor, as they unfortunately tend to wean the student from his systematic text-books, but Nancrede's manual forms an exception. It is a good dissecting manual, and it also contrives to impart a good deal of information about anatomy. A very valuable feature of the work is a collection of thirty colored plates, giving dissections of all of the important surgical regions of the body. These beautiful plates have been reduced from the life-size plates of MacLise, Savage, Nuhn, and Hirschfeld. The text of the work covers 320 pages, and is divided into questions and answers; 117 wood cuts illustrate the text. The work concludes with 68 wood cuts of the entire osseous system. These figures are reproduced from Gray's anatomy, but on a smaller scale.

Nancrede's book is a very good dissecting-room companion, and as such it may be commended. A. McS.

A Handbook of Diseases of Women, including diseases of the bladder and urethra. By Dr. F. Winckel, Professor of Gynecology and Director of the Royal University Clinic for Women, in Munich. Authorized translation, edited by Theophilus Parvin, M. D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia. Second edition, revised and enlarged, with one hundred and fifty illustrations. Philadelphia: P. Blakiston, Son & Co., 1889. New Orleans: Armand Hawkins. Price, \$3.50.

The translation of Dr. Winckel's book on the diseases of women is a valuable addition to the English literature on the subject, but we think it a shame that Dr. Williamson, who undertook such a laborious translation, should not have been mentioned in the title page, and only casually in the editor's preface. G. B. L.

Essentials of Materia Medica, Therapeutics, and Prescription Writing, arranged in the form of Questions and Answers. Prepared especially for Students of Medicine. By Henry Morris, M. D., late Demonstrator, Jefferson Medical College, Philadelphia; Co-editor Biddle's *Materia Medica*; Visiting Physician to St. Joseph's Hospital; Fellow College of Physicians, Philadelphia, etc. Philadelphia: W. B. Saunders, 913 Walnut street.

This little book constitutes "No. 7" of Saunders' Question Compends, and, like others of this series, is well adapted

to the purposes of the student who wishes to condense into a small compass, and rapidly review for examination, the teachings of the class room.

It is a handy and reliable work, which can be easily referred to during lectures. H. W. B.

How to Preserve Health. By Louis Barkan, M. D. American News Company, New York, 1890. A practical treatise, full of useful hints, and written in a style perfectly intelligible to the unprofessional reader.

The book is characterized by an unusual amount of common sense and every paragraph is readable and instructive. The chapters on *Impediments to Nutrition* and the *Hygiene of the Muscles* are particularly valuable. H. W. B.

A Text Book of Practical Therapeutics, with especial reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D. (University of Pa.), B. Sc., Clinical Professor of the Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania; Physician to St. Agnes' Hospital and to the Medical Dispensary of the Children's Hospital; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London, etc.; Secretary of the Convention for the Revision of the Pharmacopœia of 1890. Philadelphia: Lea Brothers & Co., 1890.

This work is deserving of more than passing notice; and we hail in it a departure in a new direction, its aim being the study of disease *pari passu* with the combination of the study of the remedy with which the disease is treated. Though not by any means exhaustive of either subject, the object of the work is attained all the better for the elimination of the experimental data, which generally serve to make therapeutics one of the driest branches of medical study.

Part I, pp. 17-28, treats of *General Therapeutic Considerations*.

Part II, pp. 29-296, treats of *Drugs* proper.

Part III, pp. 297-327, treats of *Remedial Measures other than Drugs*, and pp. 328-334, of *Foods for the Sick*.

Part IV, pp. 335-572, treats of *Diseases*; pp. 573-580, *Table of Doses and Remedies*; pp. 581-596, *Index of Drugs and Remedial Measures*; pp. 497-632, *Index of Diseases and their Treatment*.

The drugs and remedial agents are arranged in alphabetical order, and are thoroughly up to date. The alphabetical arrangement also applies to the diseases considered.

An excellent feature of the work is the index of diseases and remedies. A reference to this will show all the remedies treated of in the volume which are to be applied to, or, on the other hand, which are contra-indicated in a given disease.

This work will be particularly useful to the student, teaching him more directly than anything we have seen the application of drugs to disease, while to the hard-worked general practitioner it will serve for ready reference, and be a much-used book upon his shelves.

H. W. B.

Annual of the Universal Medical Sciences. A yearly report of the progress of the general sanitary sciences throughout the world Edited by Charles E. Sajous, M. D., and seventy associate editors, assisted by over two hundred corresponding editors, collaborators and correspondents. Illustrated with chromo-lithographs, engravings and maps. Issue of 1890.

This is the third issue of this valuable work, and, like all good things, it improves with age. The second issue contained many improvements suggested during the progress of the first. This present issue continues all of these improvements, and also contains special departments which have heretofore been considered under general heads. Among these special departments, it gives us special pride to learn that one of them, Oral Surgery, is in charge of a prominent physician of New Orleans, and former editor of the MEDICAL AND SURGICAL JOURNAL—Dr. R. Matas.

Another department, "Surgical Mycoses," is edited by Dr. Ernest Laplace, now residing in Philadelphia, but a native and former resident of New Orleans.

It would be difficult to say too much in praise of this great work. The vast army of workers in scientific fields scattered over the globe is constantly adding to our store of useful knowledge. The many branches of medical knowledge, though sometimes so highly specialized that they seem to have no connection with one another, are still indissolubly linked together; they are but parts of one grand whole, and are all governed by the same general laws. Progress in one quarter invariably reacts elsewhere, and makes progress in other quarters possible. But no unaided seeker after knowledge could learn what progress has been realized all over this big world of ours. A light that is hidden under a bushel gives light to no

one; and fragments of useful knowledge hidden away among hundreds of medical journals are practically inaccessible to all practitioners.

In order to make it possible for busy medical men to obtain a concise notion of medical progress in all lands, the "Annual" was instituted. The work itself speaks for the thorough manner in which the labor of condensing and digesting a mountain of literary matter has been done. The physician who, in the course of his practice, turns over its leaves to acquaint himself with any new measures brought forth to combat disease, little thinks of the colossal amount of work which the compilation of the "Annual" involves.

Comparisons are odious, certainly; but, while we regard a long established annual review of medicine, printed in English, with great respect, we must still claim for our American "Annual" (which is really an international production), that it is the only annual retrospect that may favorably compare with the great annual report of Virchow and Hirsch.

Progressive, enlightened physicians, who desire to keep themselves in touch with medical progress, will, we feel sure, come to regard the "Annual" as indispensable. A. Mc S.

PUBLICATIONS RECEIVED.

Alcoholic Hallucination. By Frederick W. Mann, M. D.

Importance of Œdema of the Vaginal Portion of the Cervix Uteri as a Symptom of Chronic Disease. By Andrew F. Currier, M. D.

Trépanation pour Hémorrhagie Cérébrale. Par le Docteur Just Lucas-Championnière, Chirurgien de l'Hôpital Saint-Louis.

Twenty-sixth Report of the Trustees of the City Hospital, Boston.

Injuries of the Bladder during Laparotomy. By A. Reeves Jackson, A. M., M. D.

Transactions of the Medical Society of the State of New York for the year 1890.

First Report of the National Executive Silver Committee, appointed at the St. Louis Convention, November, 1890.

Addresses commemorative of James L. Cabell, delivered at the University of Virginia, July 1, 1890. Published by the Faculty, 1890.

The Hystero-neuroses, with especial reference to the Menstrual Hystero-neurosis of the Stomach. By George J. Engelmann, M. D., St. Louis, Mo.

Menstruation and the Removal of both Ovaries. By Geo. J. Engelmann, M. D.

Essentials of Diseases of Eye, Nose and Throat. Drs. Jackson and Gleason. *Saunders' Question Compend.*

Lectures on Massage and Electricity in the Treatment of Disease (Masso-therapeutics). By Thomas Stretch Dowse, M. D. New York: E. B. Treat & Co.

Stricture of the Rectum. A Study of Ninety-six Cases. By Chas. B. Kelsey, M. D., New York.

The Sewerage of Columbus, Ohio. Address of Col. George E. Waring, Jr

Intestinal Diseases of Children. By A. Jacobi, M. D. *Two Volumes*, Physicians' Leisure Library.

An Improved Tape Measure. By Wm. C. Krauss, M. D.

The Hyperotic State of Hysteria. By Wm. C. Krauss, M. D.

A Text Book of Practical Therapeutics, with especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M. D. (Univ. of Pa.), B. Sc. Philadelphia: Lea Brothers & Co., 1890.

Proceedings of Louisiana State Pharmaceutical Association, 1890.

An explanation of the phenomena of immunity and contagion, based upon the action of physical and biological laws. By J. W. McLaughlin, M. D., Austin, Texas.

A treatise on headache and neuralgia, including spinal irritation and a disquisition on normal and morbid sleep. By J. Leonard Corning, C. A., M. D. With an appendix on Eye Strain, A Cause of Headache. By David Webster, M. D.

The Relation of Eye Strain to General Medicine. By George M. Gould, M. D.

Spinal Surgery. A report of eight cases. By Robert Abbe, M. D.

Address in Hygiene. By Thomas J. Mays, M. D., Philadelphia.

Physical Diagnosis and Practical Urinalysis. An epitome of the physical signs, etc. Edited by John E. Clark, M. D.

An analysis of some of the ocular symptoms observed in so-called general paresis. By Chas. A. Oliver, M. D.

Transactions of the Association of American Physicians. Fifth session. Vol. V.

First Report of the Secretary of Agriculture, 1889. (From Randall L. Gibson, U. S. Senator.)

An Experimental Study in Hypnotism. Dr. R. Von Krafft-Ebing. New York: G. P. Putnam's Sons, 1889.

A Text Book of Obstetrics. By Dr. F. Winckel. Translated by Dr. J. C. Edgar. New York: P. Blakiston, Son & Co., 1890. New Orleans: A. Hawkins.

History and Pathology of Vaccination. By Edgar M. Crookshank, M. D. New York: P. Blakiston, Son & Co., 1890. Two volumes.

Rheumatism and Gout. F. Leroy Satterlee, M. D. Physicians' Leisure Library Series. Geo. S. Davis, Detroit, 1890.

Practical Sanitary Economic Cooking. By Mrs. Mary Hinman Abel Amer, Professor Health Association, 1890.

Mineral Springs, Health Resorts of California. Winslow Anderson, M. D. San Francisco: The Bancroft Co., 1890.

Transactions of Medical and Chirurgical Faculty of State of Maryland, Baltimore: Jno. B. Kurtz, 1889.

Description of Johns Hopkins Hospital. By J. S. Billings, M. D. Baltimore, 1890.

Transactions of the American Pediatric Society, First Session. Together with Proceedings of the Meeting for Organization. Edited by Wm. Perry Watson, A. M., M. D. Vol. I. J. B. Lippincott Co., 1890.

OBITUARY.

DR. WINTHROP.

Dr. Henry Winthrop, a well known citizen of Charleston, and perhaps the oldest physician in this city, and member of the Medical Society of South Carolina, passed away on Tuesday evening at 9 o'clock, at his residence on Tradd street, at the ripe age of 88 years.

Dr. Winthrop was too well known and admired among the members of his own profession and the older members of this community to need eulogy or praise. He was a graduate of the University of Pennsylvania at a time when that school of medicine in Philadelphia was the most renowned in this country, and at a time when the medical college of our own city had not been organized or established.

He had been until about ten years since, when failing health compelled him to retire from the active duties of his profession, in active practice in Charleston, at least since the year 1830, and had numbered among his many patients many who have long since passed away. During his long and useful life he had filled many positions of trust and responsibility connected with his avocation, and was for a great many years in charge of the Charleston dispensary. Always a prominent and influential member of the medical society, he was one of its most valued supporters and earnest attendants.

Dr. Winthrop was himself a native of Charleston, his parents, however, being from Connecticut, and connected with the historical family of that name in New England.

Dr. Winthrop possessed, among other attractive traits, a disposition of remarkable amiability, and a placid, even temperament that rendered him greatly admired and beloved by all who knew him, especially among his patients, and very popular with his brother physicians.

For a considerable time before his death his health was greatly impaired, and he was unable to leave his residence. His sufferings were borne with great resignation and fortitude until the long expected summons to leave came.—*Charleston News.*

MEDICAL ITEMS.

MR. HUTCHINSON'S TREATMENT OF RINGWORM.

Mr. Jonathan Hutchinson gives, in his *Archives of Surgery*, the prescription upon which he has "settled down in tolerable content" for the treatment of ringworm, after having tried a great variety of remedies without equal satisfaction. He relies chiefly on chrysophanic acid. He orders as a wash for the scalp one drachm of Wright's liquor carbonis detergens to the pint of hot water. Twice a week the scalp should be well washed with this, and all scales and crusts should be removed. The hair is cut close or shaved. The chrysophanic-acid ointment contains a drachm of chrysophanic acid, twenty grains of ammoniated mercury, a drachm of lanoline, six drachms of benzoated lard, and ten minims of liquor carbonis detergens. This ointment is to be rubbed in more or less freely, according to its effects, night and morning, or latterly every night only. The cure will be slow probably, and the secret of success consists in the patient continuance of the same remedy. To those who persevere he promises recovery; it is only the impatient who are disappointed. He has no faith in the rapid cure of ringworm.—*New York Medical Journal*.

FOR "BLACK AND BLUE."

To prevent the blood from settling under a bruise, there is nothing to compare with the tincture or a strong infusion of capsicum annuum mixed with an equal bulk of mucilage of gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the surface with a camel's-hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent the blackening of the bruised tissue. The same remedy has no equal in rheumatic stiff neck.—*St. Louis Polyclinic*.

THAT MICROBE KILLER.

In order to satisfy any one who may not at the time have seen our exposure of Radam and his nostrum that we are not too severe, we will quote the following paragraph, which has been recently going the rounds of the press, says an exchange: "Radam's microbe killer is recommended to kill and rid from

the human system all disease-producing germs. According to Dr. R. G. Eccle's analysis, given in the *Druggists' Circular*, it is composed of 'oil of vitriol, impure, 4 drachms; muriatic acid, impure, 1 drachm; red wine, about 1 ounce; well or spring water, 1 gallon. This concoction is sold for \$3 per gallon, less than 5 cents being required in its manufacture.''' Such a combination of ingredients may kill the microbes, but what about the effect on the person taking the terrible dose? It reminds one of the tame monkey that was guarding his master while sleeping. When a fly alighted upon the forehead of the object of his tender care, he picked up a stone and threw it, intending to kill the fly, but alas, crushed his master's skull, thus killing both at one stroke.

IMPORTANCE OF PREVENTING ABORTION.

Dr. Johnson, of Washington City, in a lecture on *Abortion and its Effects*, uses the following emphatic language:

Questions of drainage, sewage, quarantine, vaccination, antiseptics, are all-important in the prevention of disease, and have doubtless saved thousands of lives, but they all sink into insignificance in comparison with the importance of the subject under discussion. I believe that statistics might be adduced, if time and your patience would permit, to show conclusively that more lives are annually sacrificed by the unnecessary and intentional destruction of the human fœtus than are saved by all these agencies combined.

MISCARRIAGE—WHY MORE DANGEROUS THAN A NATURAL LABOR AT TERM.

Prof. William Goodell in a recent clinical lecture (*Practice*, Feb. 20, 1890), answers this question as follows: Because the very fact of a miscarriage implies some lesion—something abnormal; because, the placenta not being fully formed, the chorionic villi are attached to the whole surface of the womb and some portions of the membrane are liable to remain behind and cause either hemorrhage or septicæmia. Then, again, the cervix is not effaced, and the small canal is liable to close up on the retained fragments. A criminal abortion is still more dangerous, because gestation is abruptly interfered with before any detachment of the membrane has taken place, and their retention is therefore far more likely to happen than in an honest miscarriage. A stung or decayed apple falls from its bough at the slightest breeze; while to pull off a healthy green

one demands a force which often snaps the bough from which it hangs. This illustrates the difference between a natural miscarriage and a criminal abortion. In the former, the process of detachment is usually slow and complete. In the latter the detachment is violent, incomplete and traumatic. The result is retention of the membranes, from which come serious hemorrhages and still more serious septic infections. Should the patient fortunately escape these, she will hardly escape an arrest of involution and its resulting discomforts.—*St. Joseph Medical Herald*.

NOT A FAST ; BUT A FRAUD.

For several months past the newspapers have been publishing sensational descriptions of the condition of a woman in Allentown, Pa., whose case is said to have "puzzled the doctors." It is asserted that she has not tasted food for nearly six months, and some accounts say that she did not drink any water. Of course, such a case is regarded as marvelous by the general public. But the like is not unknown in medical history. Physicians know that it is absolutely impossible for life to be maintained for such long periods, especially in connection with violent muscular exertion such as accompany convulsive action, and this has been a prominent feature of the case of the woman referred to.

The *Reporter* has taken the trouble to investigate this matter in the interest of science, and can assure its readers that this is not a case of fasting. We have no hesitation in asserting that this woman receives both food and drink every day. At present she is not emaciated, or but slightly so. She perspires, her muscles are firm, and she has considerable deposit of subcutaneous fat. She has regular, though not frequent, motions of the bowels. Her attending physician is quoted by the newspapers as believing the case to be one of genuine inability to partake of nourishment by the mouth ; but the readers of the *Reporter* will understand that the facts stated above are absolute and convincing proof that she does get food and assimilate it regularly, notwithstanding the belief of her physician.

This is not a case in which there can be any doubt at all. In due time we shall probably learn just how her feeding is managed ; but this information is not at all important to a just opinion in regard to the case. Quite a number of similar impositions have been practised in the past, but all have been finally detected. The present case is not at all wonderful from a physiological standpoint, but interesting as a so far successful imposition on the public.—*Medical and Surgical Reporter*.

MOSNY ON A CASE OF ERYSIPELATOUS BRONCHO-PNEUMONIA.

A woman aged 37, a domestic, while attending her master affected with erysipelas of the face, fell ill and was sent to the hospital, presenting all the symptoms of primary pneumonia, without any morbid manifestation, either on the skin or in the respiratory mucous membranes. The disease proved fatal, and at the necropsy the streptococcus erysipelatis was found in the exudation from the lungs. Three drops of a recent culture injected under the skin of the ear of a rabbit produced the ordinary experimental erysipelas, and it was concluded that this case was one of primary erysipelatoous broncho-pneumonia. —*Lancet, February 22, 1890.*

NOTES.

We are authorized to state that any physician can, upon application, receive a copy of Dr. G. Frank Lydston's valuable lecture upon "Sexual Perversion." Application should be made to Dr. G. Frank Lydston, Opera House Block, Chicago, Ill.

OFFICIAL LIST OF THE CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FROM AUGUST 12, 1890, TO SEPTEMBER 6, 1890.

- VANSANT, JOHN, Surgeon.—Granted leave of absence for thirty days, to take effect upon return of Ass't Surgeon J. C. Perry to duty. September 5, 1890.
- WYMAN, WALTER, Surgeon.—To proceed to Cape Charles Quarantine Station, on special duty. August 25, 1890.
- STONER, GEO. A., Surgeon.—Granted leave of absence for four days. August 19, 1890.
- CARMICHAEL, D. A., P. A. Surgeon.—Leave of absence extended fifteen days. August 26, 1890.
- AMES, R. P. M., P. A. Surgeon.—To proceed to Memphis, Tenn., on temporary duty.
- DEVAN, S. C., P. A. Surgeon.—Leave extended five days on account of sickness. August 12, 1890.
- WILLIAMS, L. L., P. A. Surgeon.—Granted leave of absence for thirty days. September 5, 1890.
- GOODWIN, H. F., Ass't Surgeon.—Granted leave of absence for thirty days. August 31, 1890.
- COBB, J. O., Ass't Surgeon.—To proceed to Marine Hospital, Detroit, Mich., for duty. August 16, 1890.
- HUSSEY, S. H., Ass't Surgeon.—Granted leave of absence for thirty days. August 19, 1890.
- PERRY, J. C., Ass't Surgeon.—Granted leave of absence for twenty days, to take effect when relieved. September 3, 1890.
- YOUNG, G. B., Ass't Surgeon.—To rejoin his station at St. Louis, Mo., when relieved. September 3, 1890.

APPOINTMENT.

- ROSENAU, MILTON J., Ass't Surgeon.—Commissioned as an Assistant Surgeon by the President, August 25, 1890. Ordered to Chicago, Ill., for temporary duty. August 27, 1890.

MORTUARY REPORT OF NEW ORLEANS

FOR AUGUST, 1890.

CAUSE.	White	Colored	Male	Female	Adults	Children	Total
Fever, Yellow							
“ Malarial (unclassified)	8	8	7	9	8	8	16
“ Intermittent							
“ Remittent	7	5	5	7	7	5	12
“ Congestive	3	3	4	2	6		6
“ Typho-Malarial	6	4	5	5	7	3	10
“ Typhoid or Enteric	2	2	1	3	3	1	4
“ Puerperal							
Scarlatina							
Small-pox							
Measles	1	1		2		2	2
Diphtheria	3	1	2	2		4	4
Whooping Cough		3	2	1		3	3
Meningitis	3	4	4	3	2	5	7
Pneumonia	7	9	11	5	8	8	16
Bronchitis	10	3	6	7	3	10	13
Consumption	39	25	31	33	62	2	64
Cancer	6	4	4	6	10		10
Congestion of Brain	5	2	5	2	6	1	7
Bright's Disease (Nephritis)	13	5	13	5	18		18
Diarrhœa (Enteritis)	16	7	16	7	14	9	23
Cholera Infantum	8	3	5	6		11	11
Dysentery	4	1	3	2	5		5
Debility, General	1	3	1	3	4		4
“ Senile	10	9	7	12	19		19
“ Infantile	2	7	6	3		9	9
All other causes	152	84	124	112	150	86	236
TOTAL	306	193	262	237	332	167	499

Still-born Children—White, 23; colored, 16; total, 39.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 19.90; colored, 33.32; total, 23.57.

DIPHTHERIA RECORD FOR AUGUST, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	1		1	1	1		1
2	5	2	7	2	1	1	2
3				3			
4	1		1	4			
5				5			
6	4		4	6	1		1
7				7			
	11	2	13		3	1	4

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—AUGUST.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precip. in inches and hundredths..	SUMMARY.
	Mean.	Max.	Min..		
1	80	85	75	T	Mean barometer, 30.066.
2	82	88	76	T	Highest barometer, 30.176, 2d.
3	78	87	70	.26	Lowest barometer, 29.886, 27th.
4	80	89	72	O	Mean temperature, 80.6.
5	82	89	74	O	Highest temperature, 91, 21st; lowest, 67, 10th.
6	80	86	74	T	Greatest daily range of temperature, 22.
7	80	87	74	.14	Least daily range of temperature, 8.
8	82	88	76	T	MEAN TEMPERATURE FOR THIS MONTH IN—
9	82	89	76	T	1871.....82.8 1870.....81.9 1881.....82.8 1886.....81.4
10	78	89	67	.24	1872.....82.5 1877.....82.8 1882.....80.5 1887.....81.0
11	79	86	72	.29	1873.....81.0 1878.....83.6 1883.....83.3 1888.....78.2
12	80	88	72	O	1874.....83.8 1879.....80.8 1884.....82.3 1889.....80.0
13	82	88	75	O	1875.....79.1 1880.....81.1 1885.....80.4 1890.....—
14	80	86	74	T	Total deficiency in temp'ture during month, 42.
15	82	90	75	O	Total excess in temp'ture since Jan 1, 390.
16	82	88	77	T	Prevailing direction of wind, N. E.
17	82	87	76	O	Total movement of wind, — miles.
18	82	88	76	O	Extreme velocity of wind, direction, and date,
19	79	86	72	.41	40 miles, N., 10th
20	80	86	75	.01	Total precipitation, 3.62 inches.
21	83	91	75	T	Number of days on which .01 inch or more of
22	80	84	76	.02	precipitation fell, 12.
23	80	87	74	O	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
24	80	85	74	.59	FOR THIS MONTH IN—
25	82	89	74	.01	1871.....7.21 1876.....4.44 1881.....4.21 1886.....2.40
26	82	88	76	.01	1872.....3.75 1877.....2.54 1882.....9.47 1887.....7.42
27	76	81	72	1.58	1873.....8.30 1878.....5.31 1883.....4.12 1888.....22.71
28	82	89	74	.06	1874.....4.82 1879.....10.44 1884.....0.87 1889.....5.59
29	80	86	74	O	1875.....8.61 1880.....4.60 1885.....4.25 1890.....—
30	80	87	74	O	Total deficiency in precip'n during month, 1.71.
31	80	87	73	O	Total excess in precip'n since Jan. 1, 14.21.
					Number of clear days, 7; partly cloudy days,
					16; cloudy days, 8.
					Date of Frosts, none.
					Mean maximum temperature, 87.2.
					Mean minimum temperature, 74.0.
					Dates of thunder storms, 1, 3, 9, 10, 24, and 26.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer*

PUBLISHERS'



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NEW SERIES:
Whole No. 310.

OCTOBER, 1890.

VOL. XVIII.
No. 4.

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Baltimore Medical College.....	16	Planten's Capsules	1
Battle & Co.....	11	Robinson-Pettet Co.....	2
Bellevue Hospital Medical College.....	18	Sanitarium—Von Gohren's.....	13
Boehringer & Soehne.....	10	Sanitarium—Sunny Side.....	16
Bowden Lithia Springs Co.....	23	"Sanitas" Antiseptics, etc.....	1
Celerina.....	19	Schieffelin & Co., W. H.....	3
Cerebro-Spinant— I. O. Woodruff & Co.....	21	Sharp & Dohme.....	14
Claudel, Optician.....	16	Svapnia.....	1
Cook, Gus.....	18	Tarrant & Co.....	15
Dioburnia.....	25	Tasteless Quinine.....	13
Health Restorative Co.....	4	The American Practitioner and News.....	20
Kentucky School of Medicine.....	16	The Wm S. Merrell Chemical Co.....	9
Lehn & Fink.....	22	Victor Safe and Lock Co.....	24
Lilly & Co., Eli.....	8	Wagner Medical Manufacturing Co.....	7
Louisville College of Dentistry.....	18	Wheeler's Tissue Phosphates.....	13
Marchand's Peroxide of Hydrogen.....	26		
Mariani & Co.....	5		
Martin's Vaccine Virus.....	18		
McDermott, A.....	13		
Medical Dep't of the Tulane University.....	12-18		
Moore-McGregor Medication.....	16		
New York Medical Journal.....	17		
N. Y. Pharmaceutical Co.....	6		
Osborne, Robert J.....	13		

COVER.

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

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They have the sympathy of the JOURNAL for their misfortune, which, under any circumstances, always results in most annoying, if not damaging interruption of business; and the hope that phoenix-like from the ashes of the old concern, will arise a new endeavor, which cannot but add to their present renown.

OUR NOVEMBER ISSUE

Will contain an article on "HOW SHALL WE REDUCE HIGH TEMPERATURE?" by DR. S. W. MOORHEAD, Professor of *Materia Medica*, *Therapeutics*, *Public Hygiene* and *State Medicine* in the Keokuk Medical College, and "CLINICAL NOTES" by DR. FRED. MAYER, of Scott, La.

BUFFALO LITHIA WATER.

SPRING No. 2.

IN THE TREATMENT OF

URIC ACID CALCULI.

ART. IV.—BUFFALO LITHIA WATER IN THE TREATMENT OF STONE
IN THE BLADDER—ITS SOLVENT PROPERTIES—ITS VALUE
IN BRIGHT'S DISEASE, CYSTITIS, ETC.

BY JOHN HERBERT CLAIBORNE, M. A., M. D., OF PETERSBURG, VA.

Ex-President and Honorary Fellow Medical Society of Virginia, etc.

Reprint from the Virginia Medical Monthly of December, 1889:

"I have for many years been prescribing the use of Buffalo Lithia Water in cases of lithiasis, uræmia, Bright's disease, cystitis, and of congener affections, and with the same marked results which have followed its exhibition in like conditions by a number of other physicians. The most striking instance, however, in which I have seen the solvent properties of the waters manifested has been in the case of Mr. Thos. D. Moss, of this city. Mr. Moss has been subject to attacks of lithiasis for several years; but in August last, after one of the most violent attacks of nephritic colic, passed gravel from the kidney into the bladder, where it remained for a week or more, setting up a severe inflammation of that viscus, with all of its painful and distressing symptoms. Finally, however, the gravel re-commenced its journey and became lodged in the prostatic portion of the urethra, cutting off the flow of urine and causing retention. Being compelled to use a catheter for the relief of this symptom, I pushed the calculus back into the bladder, as there was too much inflammation to resort to either the crushing of the stone or its removal by lithotomy.

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NOVEMBER, 1890.

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No. 5.

*Paulum sepultæ distat inertie
Celata virtus.*—HORACE

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TABLE OF CONTENTS.

	PAGE.		PAGE.
How shall we Reduce High Temperature ? —By S. W. Moorhead, M. D.	341	Surgery.....	397
A Few Clinical Notes—By F. J. Mayer, M. D.	351	Medicine.....	400
Proceedings of Societies:		Laryngology, Rhinology, and Otology—Dr. Augustus McShane.....	407
Report of Tenth International Medical..... Congress.....	361	Publications Received.....	413
Tri State Medical Society.....	383	Medical Items.....	413
Editorial Articles:		Mortuary Report.....	417
Mr. Tait's Arraignment of Mr. Lister.....	386	Meteorological Summary, September, 1890.....	418
Leprosy in Louisiana—Necessity of pro- viding for Lepers.	394	Publishers' Department.....	419

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NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XVIII.

NOVEMBER, 1890.

No. 5.

ORIGINAL ARTICLES.

*No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editor on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates at a written order for the same accompany the paper.

HOW SHALL WE REDUCE HIGH TEMPERATURE ? *

By S. W. MOORHEAD, M. D.,

Professor of Materia Medica, Therapeutics, Public Hygiene and Study of Medicine in the
Keokuk Medical College.

One of the important questions most frequently presenting itself to the physician in active practice is how to deal with the febrile process. A rise of temperature above the normal characterizes most of the cases he is called upon to treat, and in not a few the fever is of sufficient intensity to require measures for its reduction. Were the pathology of all diseases the same, or if all antipyretics were alike in action, it would be a matter of indifference what febrifuge were chosen in a given case. But as the pathology is widely different in different diseases, and as the various antipyretics effect their result in ways equally diverse, it follows not only that there is latitude for choice, but also that the remedy should be adapted to the form and character of the disease and the condition of the patient. To point out in a general way some of the indications which it is believed should govern us in making a therapeutical diagnosis, is the object of this paper.

It would be interesting to discuss in this connection the essential nature of fever, but our limitations forbid. The subject is one which has perplexed medical philosophers from

*Read before the Iowa State Medical Society, at Des Moines, Iowa, April 16, 1890.

Hippocrates to the present time, and until it is definitely and conclusively settled there must continue to be more or less confusion of terms. One point must be insisted upon in the interest of clearness in view of what follows, namely: that increased heat and fever are not convertible terms. Elevation of temperature, it is true, is an essential pathological condition common to all fevers, but it is only one of many functional disturbances which are believed to be due to a common cause. In addition to rise of temperature fever is characterized by alteration of the processes of innervation, circulation, secretion, nutrition, and tissue disintegration. Increased heat, in other words, is only a symptom or effect of the condition known as fever, which condition is manifested no less by coincident disturbance of the functions just named. If this view be correct, remedies which simply reduce temperature are not necessarily antifebrile remedies, and the term "antipyretic," as commonly used and understood, is a misleading one.

Were fever and elevation of temperature identical, reduction of temperature would mean cessation of the febrile process. But anti-thermics are not *per se* curative agents of fever, and an "antipyretic," so-called, is or is not an antifebrile remedy according to whether it acts in opposition to fever or only in opposition to increased temperature. Attention is called to this distinction at the outset because of the conviction that in the treatment of fever attention should not be confined to the temperature alone; and that in making an estimate of the comparative value of the different so-called "antipyretics," regard should be had to their several effects upon the nervous, circulatory, nutritive and secretory systems, as well as upon the body heat. It is insisted, therefore, that the heat reducing agent employed in a given instance shall, if possible, be one which will neutralize or counteract the cause of the fever; or, if that be out of the question, one which will most favorably modify all the disturbances of function resulting therefrom: that whenever possible the anti-thermic shall be also a febrifuge.

It is obvious that an increase in temperature must depend upon an increase in heat production, or lessened heat loss, or both combined. Antipyretics, accordingly, may be divided into

two general classes: (1) Those which lessen the production of heat; and (2) those which promote the loss of heat. Some, as we shall see, act in both ways. A lessened production of heat may be effected by interfering with tissue change, (*a*) by altering the composition of the blood, (*b*) by reducing the circulation. Examples of the agents lessening tissue change by reason of their effect on the blood are: Quinine and other alkaloids of Peruvian bark, antipyrin, acetanild, phenacetine, salicin, salicylic acid and the salicylates, salol, carbolic, benzoic and picric acids, thallin, chinoline, hydroquinone, pyrocatechin, kairin, kairolin, resorcin, pheno-resorcin, berberin, alcohol, camphor, eucalyptol, thymol and other essential oils. Many of these in full doses have also a depressant effect upon the heart and respiration. Quinine in antipyretic doses interferes with the oxidation processes in every part of the body. As an energetic protoplasmic poison it diminishes the absolute number of white blood corpuscles by interfering with their formation. By lessening the affinity of these corpuscles for the oxygen of the hæmaglobin it retards their amœboid movements and hinders their migration from the capillaries. Its action on the red corpuscles is to prevent them from taking up oxygen, or ozone; to bind that which they already contain more closely to the hæmaglobin, and to prevent it from giving it up to the tissues. Thus deprived of oxygen, oxidation heat is lessened to a corresponding degree.

The action of antipyrin, acetanilid, salol, phenacetine and the other members of the aromatic series of carbon compounds is similar to that of quinine, but not identical. They interfere with oxidation by producing important changes in the blood different from those of the cinchona alkaloid. As a result of their administration the red blood corpuscles are altered in form, and the hæmetin is separated from the other constituents. Owing to the lessening in quantity thus produced of the oxyhæmaglobin, and the corresponding formation of met-hæmaglobin, the "ozonizing" function of the blood is seriously impaired, and nitrogenous metamorphosis, with evolution of heat, diminished. The cyanosis and collapse sometimes witnessed are a result of the partial and temporary disintegration of the red globules produced by these agents. If the amount

of the drug used be large, disorganization of the whole mass of the blood ensues, and that fluid assumes a chocolate tint.

Chief among the agents which act through the medium of the circulation are venesection, aconite, veratrum, antimonials, colchicum, trimethylamine, chloral, large doses of quinine, and digitalis. With the exception of the last named, these have a depressant action on the intra-cardiac motor ganglia and the vaso-motor and respiratory centers in the medulla. The force of the heart is consequently weakened, the arterioles are dilated, the blood pressure lowered, and the respiratory movements lessened in depth and frequency. As a result, aeration of the blood is impeded, and less heat is generated. Aconite, veratrum and trimethylamine also contribute to this end by slowing the heart through their action on the inhibitory apparatus; while antimony, in addition to its effect on the circulation of the blood, combines with the red corpuscles, lessening their oxidizing power. Digitalis strengthens as well as slows the heart, and stimulates the vaso-motors with consequent rise of blood pressure. The most plausible explanation of its antipyretic action is that it lessens tissue change by contracting the dilated terminal vessels. In fever there is partial vaso-motor paralysis, with dilated arterioles and low blood pressure. It is the observation of Akerman, confirmed by Heidenhain, that as the blood pressure falls the temperature rises; and that as the blood pressure rises the temperature falls; that there is in fact an antagonism between the temperature and blood pressure. If this be true, the *modus operandi* of digitalis is explained.

Loss of heat may be promoted in several ways. Dilatation of the cutaneous vessels by means of alcohol or the nitrites increases the bulk of blood in the external cooling area, and thus produces increased radiation of heat. Some valuable experiments recently performed show that so great is the radiating power of the skin that in health as much as 60 per cent. of the heat leaving the body does so by radiation.

Diaphoretics are another powerful means to the same end. To this class belong some of the remedies which lessen tissue change, notably antipyrin, acetanilid, thallin, kairin, kairolin, phenacetine, and salicylate of sodium. Others have been enumerated above in the list of agents acting on the circula-

tion, as aconite, veratrum, and antimony. The diaphoretic group also includes the nitrites, Dover's powder, ammonium and potassium salts, jaborandi, warm drinks, the wet pack, vapor and Turkish baths. In addition to dilating the cutaneous vessels, allowing free radiation from the surface, diaphoretics cause a loss of heat, due to the evaporation of the sweat.

By the conversion of the water into aqueous vapor a large amount of sensible heat is rendered latent, and the temperature of the body correspondingly reduced. When it is remembered that five and one-half times as much heat is required to convert boiling water into steam as is required to raise water from the freezing to the boiling point, the amount of heat abstracted from the body by the evaporation of the perspiration will be readily conceded to be very great. Inasmuch as during the active stage of fevers the cutaneous surface, as well as the mucous membrane lining the whole extent of the respiratory tract, is drier than natural, it is highly probable that the elevated temperature in many cases is due quite as much to lessened exhalation of aqueous vapor, and consequent retention and accumulation of heat in the body, as to increased activity of molecular changes in the tissues. Diaphoretics restore the lost balance between heat production and heat loss, and are therefore a rational as well as a powerful means of reducing high temperature.

Diuretics, as well as diaphoretics, are true physiological antipyretics. The kidneys are the chief organs by which the system excretes the products of tissue change. In fever the tendency is for them to become inactive, while at the same time the work required of them is increased. By the administration of diuretics their excretory activity is heightened, waste material resulting from the disintegration of nitrogenous tissue is eliminated, and the system rid of one of the chief elements in maintaining the febrile condition.

Still another method of increasing the loss of heat is its direct abstraction from the body by means of wet packing, cold sponging, and tepid or cold baths. Ice and cold fluids taken into the body destroy or neutralize a certain amount of heat, and in doing so aid in reducing the body temperature. The application of cold in the treatment of febrile conditions

dates back to antiquity, and is an effective, speedy, and sensible plan of getting rid of superfluous heat. With proper precaution it is also one of the safest methods of combating fever. One great advantage it possesses over the chemical antipyretic is that it is an antifebrile remedy, while they are simply antithermic.

The reduction of temperature is but one of the results of hydriatic treatment of fever. Its effect upon circulation, innervation, nutrition, tissue metamorphosis and the other physiological functions which are disturbed by fever are not less important than the lowering of the temperature. It is undeniably tonic to the nervous system, including the brain, and counteracts the muttering delirium, carphologia and other evidences of nervous depression. It does not impair the oxygen-carrying power of the blood, nor is the composition of that fluid altered in any way except as the result of improved digestion and assimilation of food, and an increased secretion of urine. It temporarily restores circulation and respiration approximately to the normal. As a result of the hydriatic treatment the cardiac action becomes stronger, slower and more regular: the tension of the blood vessels is increased through stimulation of the vaso-motors; respiration is deepened and slowed: all the secretions are increased; appetite and digestion are improved; the whole system is refreshed and invigorated, and the patient fortified against the danger of inanition and adynamia. It follows from this that a high temperature is not the principal, and by no means the only, indication for hydrotherapeusis in fever. All the physiological disturbances are favorably modified by it; the tendency to complication is lessened, and the chances of recovery promoted.

From the foregoing review of the manner in which the several classes of antipyretics produce their effects, some conclusions are possible as to the indications and contra-indications for each. In the continued fevers which tend directly to debility or functional impairment, as the typhoid group, the chemical antipyretic should not be used, except possibly as a last resort. There are several reasons for this belief. Good authorities now hold that the elevation of temperature, when within the usual bounds of typhoid fever, not only does not en-

danger life, but may be a wholesome reaction against a *materies morbi*; that febrile heat is a sanative power by which the body consumes and destroys a virus or germ it could not directly eliminate. However this may be, it is indisputable that the deaths from typhoid do not correspond absolutely to the height of the fever. Prof. Welch, of Johns Hopkins University, in his Cartwright lectures on the "Pathology of Fever," has quite clearly shown from both experimental and clinical data, that high temperature is not the chief determining feature of fatality in typhoid, that failure of the heart's power is less an effect of high temperature than of other concomitant conditions: that infection and ptomaine intoxication resulting from it are chiefly concerned in the production of fatty degeneration of the heart; that the disturbances of the sensorium which constitute so prominent a part of the group of so-called typhoid symptoms, are also dependent in a far higher degree upon infection or intoxication than upon the heightened temperature, and that the lessened perspiration, the renal disorders, and the digestive disturbances, with the possible exception of constipation, are referable likewise to other causes.

In these conclusions other eminent authorities coincide. The chemical antipyretics, being simply anti-thermic, are therefore unnecessary in typhoid, except perhaps in very rare instances. Again, as is well known, the quality of the blood in typhoid is seriously impaired. Not only does it contain the product of tissue waste in abundance, but it is deficient in its nutritive and formative constituents. The red corpuscles are deficient in oxygen-carrying power and are disposed to disintegrate. The antipyretics in question lessen the quantity of urine and the amount of urea, uric acid, sodium chloride, phosphoric and sulphuric acid excreted, thus favoring an accumulation of effete and toxic matter in the blood, and coincide with the disease in its tendency to destroy the red globules. They likewise coincide with the disease in their effects on the nervous system, and tend to the production of destructive parenchymatous changes in the liver and kidneys. Consequently they are positively harmful as well as unnecessary in typhoid. It is owing, no doubt, to the fact that the chemical antipyretics and the specific poison of typhoid have a like

action upon the integrity of the red blood corpuscles and upon the kidneys that toxic symptoms are developed more frequently from the administration of these agents in typhoid than in any other disease. Another objection to their use is the fact that succeeding the temporary fall produced by their action the temperature frequently rises higher than before. It is not claimed for them by any one that they shorten the duration of the fever, while under their use the mortality, as shown by statistics, has markedly increased. Further proof of their inutility and harmfulness in this disease would seem to be unnecessary. A careful review of their action and effects must inevitably lead to the conclusion of Brand, that the only advantage to be derived from them in typhoid is that the patient is able to die with a nearly normal temperature.

For reasons already stated, diuretics and hydro-therapeusis would seem to be preferable to other means in the treatment of grave cases of typhoid. Quinine does not favor excretion of the effete products of the system, and unless a malarial element be present it has little if any value in large doses except to lower the temperature. If unabsorbed from the stomach, as sometimes happens when given in solid form for an antipyretic effect in typhoid, it passes down through the intestines and is likely to increase diarrhœa by its irritant effects upon the ulcers present. When absorbed, it adds to the effect of the fever by its action on the blood, the heart, the respiratory and vaso-motor centers, and the sensorium.

Chloral, aconite, veratrum and antimony are too depressing to the heart.

It may be admitted that there are objections to sponging or the bath treatment, but they do not outweigh its advantages. Like all other powerful and valuable remedial measures, it requires the exercise of judgment in its use to adapt it to the condition of the patient and the stage of the disease. It is an annoyance to the patient, and is less convenient than the expectant plan of treatment, or the administration of the coal tar products. Popular prejudice is against it, but it is confidently believed that with clearer views of the pathology of typhoid and other adynamic diseases, and of the ends to be accomplished in their treatment, this plan will obtain more and more.

With our present light on the subject but one better thing can be suggested, namely: a special antipyretic to antidote the specific cause. In the absence of this, sponging or the bath treatment must continue, for the present at least, to yield the most triumphant results.

In the periodical group of fevers due to malaria, quinine, as all will admit, is the antipyretic *par excellence*. It is a positive antidote to the malarial miasm, and destroys or removes from the system the exciting cause of the disease. The cause having been removed, the resulting functional disturbances subside. Quinine is in such cases an anti-febrile remedy as well as anti-themic, and should be used to reduce high temperature caused by malarial miasmatic poison in preference to anything else.

High temperature due to rheumatism is probably best controlled by the coal tar derivatives. Their beneficial effects are seen not only in reduction of the fever heat, but also in relief from the articular and muscular pains, and in subsidence of the local swelling. Statistics would seem to show that they do not materially shorten the disease, and therefore lack the specific power which quinine has over the paroxysms of ague. But they control, better than any other antipyretics, the manifestations of the disease, and contribute more largely to the comfort of the patient. Occasionally they fail to relieve hyperpyrexia, when quinine may be given or baths employed. In this disease the conjoined administration of alkaline diuretics, as all are aware, has a most salutary effect.

As compared with each other, salol stands first of the chemical antipyretics in point of safety. Though slower in its action than some of the others, it is quite as efficient in many cases, and produces less injurious after-effects. Antipyrin is prompt in action and less toxic than any of the others of equal power except salol. Acetanilid more seriously affects the composition of the blood, and the same is true of phenacetine, which is closely allied with the former from a chemical standpoint. Thallin, kairin, hydroquinone, and resorcin should not be used. In small doses they exert a destructive influence on the red blood corpuscles sufficient to condemn them, and in doses slightly larger than are sufficient to lower temperature they cause heart paralysis.

The initial high temperature of sthenic pneumonia is combated most promptly and effectively by venesection or a full dose of quinine. Both reduce and equalize the circulation, which is all-important at the outset. During the first stage the condition of the pulse is a better guide for administration of remedies than the thermometer. Quinine is to be preferred to aconite, veratrum and other heart depressants at the beginning, because it acts more promptly when not a moment is to be lost, and because also of its power to check or lessen exudation by reason of its effects on the movements and migration of white blood corpuscles. For the latter reason also it is to be preferred to the chemical antipyretics, which are destitute of such power. When given early enough it is the common experience that a proportion of cases are abortive as a result.

At the beginning of local inflammation quinine given with or followed by aconite, veratrum or other cardiac and vaso-motor depressant is admirably calculated to meet the pathological conditions present.

Fermentation in the intestinal canal is sometimes a cause of high temperature. In such cases salicylic acid, salol or naphthol would seem to be specially indicated for reasons apparent to all.

If there is any agent capable of destroying or neutralizing the specific contagium of the eruptive fevers it remains to be discovered. In its absence the best method of reducing temperature, lessening excitability and restlessness, and promoting normal actions in the system, particularly in scarlatina and rubeola, is the application of water to the surface of the body, with the administration of diuretics and diaphoretics internally. The chemical antipyretics produce no appreciable improvement aside from the reduction of temperature; they cause retardation of the excretory functions; neither prevent nor modify the ordinary syndromes and complications of the eruptive diseases, and prolong rather than shorten their duration.

It is to be hoped that the time will come when we will be able to combat each fever with directly specific weapons. Until then let us be careful to make as intelligent choice as possible of the means at our command. If we can not destroy or neutralize the cause of the disease, let us at least avoid tampering or disabling the system in its struggle for life.

A FEW CLINICAL NOTES.

By F. J. MAYER, M. D., Scott, La.

Malaria, so often made the scapegoat for ignorance, is, notwithstanding, so important a factor in the ills which afflict the "Attakapas," that there are but few diseases the symptoms of which are not masked, modified or obliterated by its pernicious influences, and this to such an extent that it is no wonder that the country practitioner's devotion to the "bark" is only equaled by his more favored city confrère's penchant for the iodide of potassium. While the pronounced types of malarial toxæmia are readily distinguishable, the hybrid and irregular manifestations are more difficult to diagnose. This is why the country doctor has learned by bitter experience to administer the drug rather indiscriminately, for in nine cases out of ten it hits the mark.

He knows it is not scientific, but his main object is to pull his patient from out the slough of despond; besides, not alone the experience of physicians in the Attakapas region, but the empirical knowledge of the laity has earned for the quinine bottle an honored seat—cheek by jowl—with the flour barrel in every well regulated household.

Whether malaria is due to the protozoa described by Laveran, whose observations have been so quickly confirmed by Golgi, Marchiafava, and Celli, in Italy; Carter, in India; and Councilman, Osler, and James, in this country, is of course still an open question. Further investigation, I am convinced, will bear out their belief, that this intra-cellular parasite stands in an immediate causative relation to malarial manifestations. Be that as it may, this we do know that: This paludal poison, whatever its intra-cellular nature may be, in its outward manifestations is a protean monster assuming a thousand different shapes and disguises, and of a verity "apes more fantastic tricks before high heaven than would make the angels weep."

Of the many malarial anomalies which have come under my observation in the past eight years, perhaps the most curious of all is a case of what, for want of a better term, will call *malarial glossalgia*.

It is the only case on record.

CASE No. 1.—Mrs. H. C., æt. 53, married, the mother of

twelve children, of a phlegmatic temperament. First child born in 1854: the last in 1880; two miscarriages, the last in 1879. Gave a history of having enjoyed perfect health up to 1883, when she became slightly jaundiced and was seized with a moderate pain in the right side of the tongue, greater in the morning, lasting all day and subsiding toward night, so that she slept well; at about this time menstrual irregularities set in.

She attributed the pains to toothache and applied home remedies without obtaining relief. This state of affairs continued until the winter: the following year the pain recurred at varying intervals, diminishing in intensity during the winter: in 1885 the pain continued, but was not very severe. All this time she attributed it to toothache, and in September of that year she reluctantly parted with one of her molars: by this time she had become quite anæmic, and in August, 1886, had such a violent attack of pain that she almost had convulsions, and had to be carried to her bed.

The pain was of a lancinating character, extending from the last molar behind to the tip of the tongue and limited as before to the right border. The pain was almost continuous and would recur at irregular intervals, aggravated by the slightest movement of the tongue; although the tongue itself was not sensitive she was unable to eat, on account of the pain caused by chewing; attacks would come on without any premonitory symptoms. I saw her a few moments after this violent seizure and administered a hypodermic of morphia and atropia, which gave temporary relief. When the pain had subsided sufficiently to enable her to open her mouth, I made a careful examination of the tongue, but could detect no abnormality, no swelling, no alteration in size or color, no sores nor aphthæ, no excrescence (like in those cases reported by Albert), in fact, no physical alteration which could account for the intense neuralgia: the act of examination was attended with considerable pain, owing to the lowering of temperature on opening the mouth and to the unavoidable moving of the tongue. The ingestion even of liquids, unless of the same temperature as the mouth, was followed by a seizure. Here was truly a novel case, and I have been unable to find one case exactly like it in the literature of the subject.

Butlin, in his elegant work on diseases of the tongue, gives the history of a case resembling this one in some particulars, but differing in the fact that in his case a pimple, unusually painful, had preceded the attack, on the tip of the tongue, to which he referred the origin of the neuralgia.

I purged her and blistered her, wading through the pharmacopœia seeking for that drug "within whose infant rind poison hath residence and medicine power." Gave her *belladonna à la Trousseau* and tonic *à la Vicmeyer*, filled her with shotgun prescriptions and extracted all carious teeth, all of which afforded only temporary relief, the pain recurring when the effect of the drugs would wear off. I enriched the blood with tonics, which helped matters, but still it would recur, though diminished somewhat in intensity. At times, however, it would be so severe that the mouth could barely be opened wide enough to admit a spoon. Convinced that malarial toxæmia was at the bottom of the trouble I saturated her with quinia. The effect was magical, and for a while a complete surcease of pain ensued.

Unfortunately, however, the *neuralgic habit* had been formed, and while the pain was never excruciating, as it was before the administration of the quinia, still it would recur, when she would be compelled to resort to her pills and potions.

After a vigorous course embracing a thorough cleansing of the portal system, with Sprudel salt and Carlsbad water, and building up with tonics of quinia, iron, strychnia and arsenic, together with a blister to the nape of the neck, varied with a hot salt bag, and the free administration of cod liver oil in emulsion with the hypophosphites of lime and soda, she seemed to become all right, and grew to an immense size.

Her appetite was voracious, digestion perfect, and her general health better than it had been, even before the first attack in 1883. For over a year she enjoyed almost complete immunity from pain, but this spring, upon the breaking up of new ground on the farm, she had a slight touch, which yielded readily to a hypodermic of morphia and atropia, together with quinia and tonics. She is still under treatment, and no doubt will have periodical attacks as long as she lives in the locality where she now resides, where she is continually exposed to miasmatic influences and unhygienic surroundings.

In this case, as in others of *tic douloureux*, I found that counter-irritation applied to the occipital nerve at the nape of the neck, as recommended by Anstie, afforded more relief than by applying it to branches of the fifth. The emulsion of cod liver oil with hypophos. of lime and soda I regard as a most valuable adjunct in the treatment of this case, as it is in all cases of facial neuralgia.*

How inexplicable is the fact that in malarial neuralgias, the brunt of attack will sometimes fall upon one nerve or set of nerves and not on others; and it is curious to note the point of election. Sometimes I have frequently had to contend with a disagreeable twitching of the eyelids and of the pectoralis major, which would be permanently relieved only after a full dose of quinia. A rather singular case of

PERNICIOUS MALARIA,

in which the point of attack seemed to be the pneumogastric nerve, was that of

CASE NO. 2.—Mrs. C., æt. 80. When I first saw her, she was suffering with orthopnea, gasping for breath, her eyes protruding from their sockets, face cyanosed, deaf, speechless, swallowing with the greatest difficulty, and the pulse imperceptible: an icy coldness had already shrouded her in the chill embrace of approaching death. Temperature 94 deg. Fahr: great nausea. She gave a history of having had a slight chill the night before, at the same hour, followed by fever of a few hours' duration, and free diaphoresis.

I ordered a mustard plaster over the regions of medulla oblongata and heart, and administered a hypodermic of brandy, ammonia, digitalis, and atropia; had her frictioned from head to foot with stimulating applications, together with hot bottles and cloths to trunk and extremities. After an hour's hard work she rallied and reaction set in. The moment she could swallow I gave her one-sixtieth grain of strychnia and thirty minims of fluid extract of quebracho, for the purpose of stimulating the respiratory center. Upon examining the heart I detected a systolic murmur, loudest at the apex. After reac-

*N. B.—These notes were compiled in April, 1889. Since then, I am glad to say that the lady was free from pain until the latter part of March, when she had a few twinges, which yielded readily to quinia and acetanilid. Her general health is perfect, but she can not take anything into the mouth, in the leastwise acid, without experiencing a very disagreeable sensation in the tongue at the site of the former pain.

tion the temperature rapidly rose until it mounted to $104\frac{1}{2}$ deg. At first I was inclined to attribute the orthopnœa to the heart trouble, but the previous attack the evening before at the same hour, together with the rapid rise in the temperature after reaction had set in, convinced me that I had a violent case of pernicious fever to deal with, in which the force of attack had evidently fallen upon the pneumogastric nerve. I hesitated no longer, and the moment an artificial sweating stage had been produced, and the nausea somewhat mitigated, I gave her ten grains of quinia every three hours until two scruples had been consumed. The digitalis and quebracho were continued. I kept her on quinia for several days, cleansing her out in the meantime with Sprudel salt and Carlsbad water, and then put her on the elixir of quinia, iron, and strychnia.

She made a fine recovery, enjoying perfect health for some months, when she died in other hands: do not know what the diagnosis was, but presume the valvular trouble of the heart finished her career. A point of interest in this case, besides the election of the pneumogastric nerve as the point of attack, was the abnormally low temperature.

CASE No. 3 affords a good illustration of

QUININE INTOXICATION.

E. D., female, æt. 34, of strumous diathesis and hysterical temperament, gave a history of chronic malarial poisoning and menstrual irregularities; fell sick with fever and took (under protest) about five grains of quinia. The patient stated that she had a decided idiosyncrasy against the drug. In a short time she was covered with an erythematous rash; there was a running from the eyes and nose; and dyspnœa, with an excessive secretion of mucus in bronchial tubes. She attributed these peculiar phenomena entirely to the quinia, which she said always affected her in this manner, even in the smallest doses. Not knowing how much of it was due to the drug and how much to rubeola (for by this time she had bloomed out in a full crop) I experimentally administered, unknown to her, a five-grain capsule of quinia with the same result, only more aggravated. The bromides, valerian and chloral, did not seem to mitigate these symptoms. One minim of normal liquid of belladonna with thirty minims of fluid ex-

tract of quebracho afforded great relief. The right lung in this case became involved in a pneumonic attack, and a periodical rise in temperature every evening about the same hour induced me to try cinchonidia, with a quick repetition of the unpleasant tonic effect upon the pneumogastric. I neutralized the malarial element with salicin and arseniate of soda. The lady made a slow and imperfect recovery on account of failure to take the tonic prescribed.

CASE No. 4.—That malaria is no respecter of age, the infant at the breast being as susceptible to its varied manifestations as old age tottering to the grave, was prettily illustrated in the case of Mr. H.'s infant, *æt.* three weeks, healthy from date of birth, and blessed with a robust parentage. When two weeks old, he became fretful and afterward feverish: dry skin. suckling by fits and starts. The first appreciable febrile movement commenced at night at 11 o'clock, preceded by restlessness, and lasting until 2:30 A. M.: during the following day it remained free from fever, but dull and listless. The following night the fever commenced an hour earlier, lasting three or four hours.

On the third day a diarrhœa set in, averaging thirty or forty stools a day; color varying from a white albuminous, flecked with flocculi, to a greenish looking fluid, and accompanied by intense colicky pains. I prescribed paregoric, put the mother on large doses of quinia *t. d.*, and ordered the child to be rubbed with quinia every three hours. Father reported that the dejections had been reduced in number, that the colic would be relieved while under the influence of the opiate, but would recur as did the diarrhœa; he further stated that he did not believe the quinia unctions were absorbed: as he expressed it, "It was just like greasing the bark of a tree." For a period of five days the febrile movement would anticipate, until it became almost continuous.

I saw the child on the sixth day for the first time and found it in convulsions, respiration labored, and irregular. abdominal walls hard, tense and painful upon pressure, the face a waxy, ashen hue, eyes glazed and lustreless, fingers tightly buried in the palms: pulse imperceptible: temperature 103 deg. I had the child frictioned with a camphorated bella-

donna liniment. The moment the peripheral circulation was equalized by these measures and a hot mustard bath, a diaphoretic was prescribed, and when the skin became moist the infant was placed upon one-eighth of a grain of quinia, rubbed up with sugar of milk, every three hours, until eight doses were taken. The child was reported all right the next day, the father stating that the quinia ointment (which had been recommended) was quickly absorbed. I caught a glimpse of the child some months after and he was the picture of health in despite of a recent attack of rubeola.

In the Attakapas region, we meet quite a number of cases of bronchitic asthma, in which malaria seems to be the exciting cause; these cases are always relieved by regulating the deranged functions of the liver, saturating with quinia, building up with iron and putting them on iodide of potassium and Fowler's solution. In the muscular rheumatism, or to speak more properly, the muscular neuralgia of spring, depending upon an impoverished condition of the blood, furnishing an unhealthy pabulum to the nerves, quinia and iron are the specifics, and even in cases of acute rheumatism, I find quinia a necessary adjunct to the treatment on account of the invariable malarial complications. In these cases after having thoroughly alkalinized the urine. I order a flannel night shirt and also envelop the swollen joints in flannel or woollen batting, wet with a hot decoction of poppy-heads rendered alkaline; then cleansing out "the foul and peccant humors of the blood" with the mild chloride of mercury, and preferably with Sprudel salt and Carlsbad or Hunyadi Janos water, unless some special indication calls for the former, I place them on large doses of quinia, and so far with the most gratifying results. In two recent cases I obtained good results from the fluid extract of manaca; in one case associated with salicylate of iodine; in the other, used alone. This drug stands high in Brazil as a remedy in rheumatic affections. Messrs. Parke, Davis & Co. put up an elixir with the salicylates of potassium, sodium, or lithium, which is worthy of trial.

Cases of threatened abortion owing to malarial toxæmia, are by no means rare in the Attakapas. I have frequently seen pregnant women, suffering from malarial fever, take large doses of quinia with the effect of quieting the uterine

contractions which had been excited during the course of the fever. At first I was very guarded in exhibiting the drug in these cases, always combining it with opium; but this precaution I think unnecessary so long as the poison in the system remains uneradicated; then, of course, it would be well to guard against a possible oxytotic effect.

The following case is the only one of pernicious fever of its kind that I have seen:

CASE No. 5.—F. F., æt. 7, with a history of intermittent fever off and on, during summer preceding the attack, the pernicious denouement having been averted by the occasional use of quinia and purgatives; on September 10, 1885, found him with a temperature of $103\frac{1}{5}$ in mouth, $102\frac{1}{5}$ in axilla, pulse 130; respiration 36, tongue heavily furred; urine scanty and high-colored; headache and an anxious, pinched expression; but the most prominent symptom was an intense restlessness, never remaining quiet for two consecutive minutes, tossing from one side of the bed to the other, perfectly conscious, and very fretful, which his parents attributed to some quinine, and certainly it did look like quinia intoxication, but as this nervous phenomenon was relieved but slightly by huge doses of bromides and chloral, with a rapidly mounting temperature, which soon reached $106\frac{1}{5}$ deg. in mouth, $104\frac{4}{5}$ deg. in axilla, cool extremities and great nausea, it struck me that I had a somewhat unique case of pernicious fever to deal with; so I prescribed chloranodyne (P. D. & Co.) 1 minim, Norris' liquid of aconite root $\frac{1}{6}$ minim, every fifteen minutes in iced mint water, had the body sponged with a hot infusion of mustard, and applied iced cloth to the head and arms. Temperature commenced to fall, until at 8 P. M. it was $104\frac{4}{5}$, axilla temperature $102\frac{1}{5}$, pulse 130.

The nausea being now somewhat relieved, in spite of protest of parents I gave ten grains of quinia every three hours until thirty grains had been taken, the bowels having been moved by a pill of calomel and colocynth. At 10 P. M. temperature in mouth, $103\frac{4}{5}$; in axilla, $102\frac{1}{5}$. Next morning at 8, mouth temperature, $100\frac{4}{5}$; axilla temperature, $99\frac{1}{5}$; had passed a fair night, tongue clearer, no headache, had taken no anodyne, but had not urinated for some hours. Applied hot cloths to pubis, and a mustard plaster to lumbar region, all to no pur-

pose; gave diuretics, which made matters worse, the condition being one of retention with overflow owing to defective innervation; child became very restless and savage. At 9:30 A. M. pulse 120 and weak; temperature in mouth, 101; in axilla, 99 deg. At 1:30 P. M. mouth temperature, 100 deg.; axilla temperature, 98 $\frac{3}{8}$. At 5 P. M. mouth temperature, 100 $\frac{3}{8}$; axilla, 99 $\frac{1}{8}$ deg.; had not urinated, bladder freely distended; had repeatedly attempted to introduce catheter, but child so restless and savage that I did not succeed, and parents positively objected to any further effort in that direction. I sent for an aspirator, and while waiting, had the child placed on bed pan and applied a chunk of ice intermittently to lumbar and sacral vertebræ; in a few seconds child commenced to urinate, passing quite a quantity.

The next morning after having passed a good night, the mouth temperature stood 99 $\frac{4}{8}$, axilla temperature 97. Commenced to take nourishment and assimilated what he took; prescribed

R	Quinia	grains ij.
	Extract Belladonna.....	" $\frac{1}{8}$
	Sulphate of Strychnia.....	" 1-140

Three times a day. With brandy and milk every three hours.

At 5 P. M. mouth temperature 99 $\frac{3}{8}$; axilla temperature 99 $\frac{1}{8}$. Slept well during the night. On the morning of the 13th found him with a mouth temperature 99 $\frac{5}{8}$ deg.; axilla temperature 99; pulse 100. Some little trouble in urinating was relieved as before by applying ice. At 8 P. M. mouth temperature, 100 deg.; axilla temperature, 100 $\frac{1}{8}$ deg.; pulse, 106. Continued the quinia. On the morning of the 14th mouth temperature, 99 $\frac{1}{8}$; axilla, temperature, 98 $\frac{3}{8}$; pulse, 112. At 7 P. M., mouth temperature, 98 $\frac{1}{2}$ deg.; axilla temperature, 98; patient looking bright and cheerful. September 15, temperature normal; pulse good; boy eating with relish. The point of interest in this case was whether the nervous phenomena were due to quinia, or to malarial toxæmia; that it was the latter, a study of the temperature chart will show. The retention of urine in this case was not due to quinia irritating the urinary passages, which it unquestionably sometimes will, but to defective innervation dependent upon the malarial condition.

The following is a fair specimen of a numerous class of cases we meet among children in the country suffering with the malarial cachexia:

CASE No. 6.—Josephine G., æt. 5, with a history of intermittent fevers at different times during the fall; fell sick in November, 1888, with a chill, followed by fever. Temperature $103\frac{2}{5}$; pulse, 150; nausea, vomiting and diarrhœa, which failed to be arrested by the usual remedies, opiates and astringents relieving only temporarily. Quinia was administered per rectum and by inunction and a mustard and spice poultice applied to the stomach, when the distressing symptoms were somewhat relieved. The tongue being foul and coated, I gave $\frac{1}{8}$ gr. calomel and soda. Character of stools was altered and later, under the influence of pepsin and bismuth, were changed from a sour, watery discharge to a bilious looking fluid. A short, dry, hacking cough, at first supposed to be sympathetic with the bowel trouble, developed into a marked case of broncho-pneumonia, the temperature rising to $104\frac{2}{5}$. The child was placed for a few minutes in a hot mustard bath and then upon the following:

R. Syr. Ipecac	\mathfrak{M}_{x} .
N. L. Aconite Root.....	\mathfrak{M}_{10}^1 .
Tr. Jaborandi.....	\mathfrak{M}_{20}^1 .

In a little orange-leaf tea every half hour for two hours, then every third hour.

When dullness on percussion became marked and bronchial respiration apparent, the formula was changed to:

Camph. Tr. Opii.....	\mathfrak{M}_{xx} .
Syr. Ipecac	\mathfrak{M}_{xx} .

In Syr. Tolu every three hours with a muriate of ammonium spray.

When the heat of the skin had subsided and resolution had commenced, ordered the chest frictioned with a camphor liniment containing turpentine and co. tr. iodine. Having suspended the quinia, the nausea and diarrhœa returned; and thinking they might be due to the ipecac, its use was discontinued. The nausea becoming worse, I prescribed oxalate of cerium, gr. $\frac{1}{10}$, and bismuth s. n., gr. j, every two hours, and five grains of quinia per rectum and by inunction; the gut refused to absorb the quinia, so I gave a quarter grain per orem in the Arom. Syr. Yerba Santa, ten consecutive doses being retained. The temperature by this time had fallen to

100 deg., pulse so feeble and intermittent that it could not be counted; improved somewhat under the free use of brandy, ammonia and digitalis.

The child seemed to be gradually sinking in despite of stimulants—peptonized milk and peptonized extract of beef. She seemed to lack the vital power to pull her through, she became cyanosed, pulseless, extremities cold, face shrunk and pinched, tongue harsh and dry, lips retracted showing teeth which were covered with sordes, eyes lusterless; ordered extremities frictioned with camphorated liniment and prescribed the arseniate of strychnia and normal liquid of belladonna leaves every three hours, and ordered mustard plaster to nape of neck and occiput: in the evening a marked improvement was reported: I was unavoidably prevented from seeing the child for twenty-four hours, during which period the change was simply remarkable, the breathing was free and easy, cough loose, the cyanosis had given place to the returning hue of health, the absorption of pneumonic deposits going on rapidly. Placed child on emulsion of cod liver oil with hypophosphites of lime and soda and Colden's liquid beef tonic, and she speedily returned to health and vigor.

PROCEEDINGS OF SOCIETIES.

TENTH INTERNATIONAL MEDICAL CONGRESS,

Held at Berlin, August 4, 5, 6, 7 and 9, 1890.

The congress days of Berlin have now passed, and to summarize all that we saw and heard, all that is spoken and written about the Tenth International Medical Congress, we may fairly say that the congress was a grand success, and even surpassed all hopes and expectations.

Before giving a sketch of the general course of the congress and the scientific work done, we think it good to say some words of the development of the International Medical Congress since its beginning, and to trace some comparative lines between the last Berlin congress and its predecessors.

Just twenty-five years have elapsed since the first impulse toward the creation of our international medical congress was

been given. It was in 1865, in the third annual meeting of the French physicians at Bordeaux, that Henri Gintrac made the proposal that on the occasion of the world's exhibition, to take place in Paris in 1867, an international medical congress should be arranged to which physicians of the whole world should be invited. The proposal was accepted and the venerable Bouillaud was elected president of the congress. In spite of the world's exhibition thus connected with the congress the number of the participants was but a very small one, and though many foreign physicians had taken part in the congress, it had no real international character, and the less so, as only the French language was used in the proceedings of the congress. The first congress was also in all other respects very defective. The second congress, which was held at Florence, was not much better off. This had still less of an international character than the first one; it was rather a meeting of Italian physicians, at which also a few foreign physicians were present.

It was not until the Third International Medical Congress, held in Vienna in 1873, that the congress began to assume a truly international character. Not only physicians of the whole world appeared at that congress, but also most of the states of Europe were officially represented by delegates, and not only the French language alone was the official language of the congress, but also the German, English and Italian tongues were declared official.

From that date not only the international character of the medical congresses developed more and more, but also the number of the members increased more and more. The congresses also gained in influence, by the fact that since the congress in Vienna the various governments used to send their representatives thereto, so that the congress thus obtained an official character; moreover, the splendor of the congresses used to be enhanced by the presence of kings and princes. The congress in Vienna was opened by an archduke of the Austrian imperial house; the opening festivity of the congress at Brussels was honored by the presence of the King of Belgium; that of London, by the presence of the Prince of Wales, and the congress of Copenhagen attained a particular splendor from the presence of the King and Queen of Denmark, as well as those of Greece.

None, however, of all these congresses, nor that of Washington, could record such a grand success as that recently held at Berlin. About 6000 physicians took part in it, and the congress may justly claim to have been international, as besides the 2918 physicians furnished by Germany, almost as many

physicians from more than forty countries of the world were present. Of foreign countries the greatest number of members was furnished by the United States of America; then came Russia, Great Britain and Ireland, Austro-Hungary, France, and Italy. More than twenty-five state governments sent official delegates, and some thirty universities and academies were officially represented by eminent champions of science.

According to the separate statistics of the members of the congress, the number amounted to 5737 and that of the other participants to 143; moreover, about 1400 ladies were present. As to the members of the various countries, the order was as follows: Germany (without Berlin), 1752; Berlin, 1166; United States of America, 659; Russia, 429; Great Britain and Ireland, 358; Austro-Hungary, 262; France, 179; Italy, 146; Denmark, 139; Netherlands, 112; Belgium, 62; Switzerland, 67; Spain, 41; Sweden, 108; Norway, 57; Roumania, 32; Luxemburg, 2; Portugal, 5; Turkey, 12; Greece, 5; Bulgaria, 5; Servia, 2; Morocco, 1; Canada, 24; Brazil, 12; Chili, 14; Mexico, 7; the rest of America, 30; Egypt, 8; Cape Colony, 1; the rest of Africa, 5; China, 2; Japan, 22; East India, 2; Dutch India, 2; Australia, 7. Out of the participants ninety-seven belonged to Germany, and 46 to foreign countries. Out of lady doctors fourteen were present at the congress.

The congress was opened on Monday, August 4, 1890, at 11 A. M., in Circus Renz, which was splendidly decorated for the occasion. Already about half-past 10 o'clock the immense space of the Circus was filled to the top, among the members of the congress being also numerous ladies. Among the medical celebrities who were present we wish to cite: Billroth, Albert, Meynert, Schnitzler, Stoerk, Schrötter, Krafft-Ebing etc., from Austria; Lister, Paget, McEwen, Horsley, Felix Semon, Andrew Clark, McCormac, Lauder-Brunton, Ord, Ernest Hart (editor of the *British Medical Journal*), etc., from England; Bouchard, Dujardin-Beaumez, Leon LeFort, Richet, Proust, Apostoli, Ollier, Chauveau, Cornil, Roux, Nicaise, etc., from France; Mosso, Celli, Baccelli, Cantani, Maragliano, Golgi, Foa, from Italy; Thiry and von Beneder, from Belgium, etc. From the United States we wish to quote: Wood, Knapp, Billings, Bernays, Senn, Keen, Sayre, O'Dwyer, Jacobi, Osler, Loomis, etc.

Some minutes after 11 o'clock Prof. Virchow appeared and was received with frantic cheers by all present. In his opening address, Prof. Virchow first gave a sketch of the previous history of the Berlin Congress, and described

the difficult task they had in preparing for the foreign guests a similar reception to that which they had met with in all the capitals of Europe. The orator expressed his sentiments of sincere joy at seeing so large a meeting, which included the first men of science. For him that day was the happiest of his life. He furthermore spoke of the interest of the German people in medicine, which will thus meet its foreign guests with the greatest esteem. Also His Majesty, the German emperor, shared these sentiments.

After Prof. Virchow had saluted the meeting and finished his address under stormy applause, the general secretary, Dr. Lassar, read a short business report. He said that more than twenty-five state governments had sent official delegates to the congress, and some thirty universities, academies and colleges were officially represented as eminent champions of science. It was with a storm of applause, lasting for several minutes, that the meeting received the communication of Dr. Lassar, stating that the French government had sent thirty-four official delegates, who were authorities known in the whole world. Dr. Lassar concluded his report with the following words: "I can not conclude this report without mentioning an homage which the most exact of all the experimental sciences, Physics, wishes to bring to medicine on this occasion. A medical layman has occupied himself with a medical problem, and charged his medical representative, Dr. Bayler, to report upon the results of his researches bearing on the electro-therapeutical removal of stone concretions to the congress. Communications of other laymen would scarcely be heeded, but that of the layman under consideration will be listened to with pleasure, for his name was Mr. Edison."

The congress was then welcomed by the State Minister, v. Boetticher, in the name of the associate German governments, by the Prussian Minister of Public Instruction, Dr. v. Gossler; the latter concluded his remarks by saying: "*Ægrotantium salus suprema lex esto*" was the inscription of the pharmacopœia of the free city of Nürnberg, three hundred years ago, and "*Sanorum incolumitas—altera lex esto*," was the device (motto) of our modern times.

In the name of the city of Berlin, the congress was welcomed by the first burgomaster, von Forckerbeck, and after him by the representative of the last international medical congress of 1887, Dr. John Hamilton, of Washington, Surgeon General of the Army of the United States of America; for the London Congress of 1881 by Sir James Paget; in the name of the French government by Prof. Bouchard, and for the Italian government by the late Italian minister of public instruction,

Dr. M. D. Baccelli, who spoke in Latin. Dr. von Czatory, of Budapesth, spoke in the name of Hungary; Prof. Schnitzler in the name of Austria; Dr. Aretæus, in the name of Greece, and Dr. Patuschin, in the name of St. Petersburg. Finally, also a representative of Uruguay took the floor.

The "Curean" of the congress was then constituted, and at the proposal of Baccelli, Virchow was named president of the congress, and besides him also the other members of the organization committee were elected into the "præsidium" of the congress.

The following gentlemen were elected honorary presidents: The duke Dr. Carl Theodor, of Bavaria; Paget, Great Britain; Grainger Stewart, Scotland; Stokes, Ireland; Billings, United States of America; Billroth, Austria; Czatory, Hungary; Crocq, Belgium; Lange, Denmark; Bouchard, France; Rubio, Spain; Baccelli, Italy; Lavista, Mexico; Laache, Norway; Stockvis, Netherlands; Asacchi, Roumania; Sklifas-soinsky, Russia; Holmgreen, Sweden; Sozin, Switzerland; Arestæos, Greece, and Guarich, Uruguay.

After a little pause of recreation, the second part of the first general meeting began; during the latter the chair was occupied by the learned president, the duke Dr. Carl Theodor, of Bavaria. Prof. Virchow delivered an excellent address on the scientific problems of medicine, which was listened to with great attention. The eloquent lecturer said, among many other things: "When, at the beginning of our modern times, three hundred years ago, the long-lasting combat between the dogma and philosophy had found a transitory conclusion, the chief question was to find a new method for the scientific work. Tradition had to be replaced by autopsy and experiment. The combat was hard and a general one.

From that combat, after long struggling, had resulted that direction of investigation which had obtained its highest value in natural sciences, the direction of independent investigation; the investigation without authority, which gradually found also the recognition in the legislation of the civilized states. Science and its doctrine are free. That has become a principle which has been—with emphasis—proclaimed officially in the constitutions of many states. Now, the chief task was to change its method of investigation.

For medicine, the change of the method was followed by a real revolution, indeed, a slow revolution, and carried out with great interruptions. One school arose after another to help its doctrines to victory against the old ones. The great decisive combat against the Galenic system, which had checked any free movement for almost fifteen hun-

dred years was fought and won in the sixteenth century. Over this large field of ruins one new construction after the other was erected after each decennary, and if we now make a retrospect toward all these memorable works, if we compare the present position of medicinal science with that of three hundred years ago, it seems clear even to the most stupid eye that the resemblance of modern medicine with the old homœo-pathology is almost equal to zero. The place of tradition was filled by investigation, that of belief by knowledge. It was only now that we possessed a medicinal science in the true sense of the word. With pride we may pronounce that medicine itself has become a natural science.

It was known that the path finder on this troublesome way was anatomy. It was Vesalius who at the time of Reformation had developed the anatomy of man to such a certainty of knowledge that, since that time, all other branches of medicine could further develop over this solid soil. Then came pathological anatomy for gathering immense details of experiences in a close connection with the study of diseases, so that a particular "codex" of the ascertained knowledge could be established. That was the signature of the time at which physicians, who are more advanced in age, have begun our own studies. After the great Italian, Morgagni, almost 100 years ago, had published his fundamental collective work, one western nation after another had begun the work of completing the science of pathological anatomy. The English, the French, and the Germans had laid fundamental stones in this direction. Gradually the exactness of investigation had improved and clinical investigation had learned to avail itself of the auxiliary means of the advanced natural sciences. The microscope, the thermometer, the optical and acoustical apparatuses, the electrical and mechanical instruments have passed into the common use of the physicians.

The language of medicine has more and more become a natural scientific one. But the more we have progressed the more it has become evident that this progress was not only a mere external, a formal one. With the change of the method, also the contents of knowledge have changed: from the formal change, also the material change has arisen. Its beginning was very difficult. With the over-hasty zeal which materially clings to young sciences one had endeavored to use the experience of the other natural sciences, and particularly those of physics and chemistry, for the construction of medical systems. From the first attempts of the iatro-physical and iatro-chemical schools of the seventeenth and eighteenth centuries until that proud and independent development which has filled up the

first part of our present century, from the time when it was believed that life and disease could be reduced to simple physical and chemical formulæ, how many unfulfilled hopes were built upon ingenious and laborious works which have since been forgotten!

It was not until the middle of our present century that matters began to clear. Our appreciation of physics and chemistry has not become less, but neither physics nor chemistry has hitherto been able to completely explain the processes of life and disease, and we may add that, if this should once be reached, these processes will not cease to represent something particular. If something is apt to illustrate the cleared state of our present knowledge, it is the fact that also in the strictest science we must recognize life as being something particular, that we can not any longer conceal the truth that medicine is not only and must not only be a mere natural science, but that it is and must be a biological natural science. It is strange enough that the notion of life, though it lies near to the understanding of every man, should have obtained only late its scientific importance. Life itself, in its character and in its processes, remained "quasi" in the background. Amid mere speculation observation had been forgotten. From the mystical "archæa" of Paracelsus and Von Helmsolt gradually resulted the "force of life" ("Lebenskraft"), a spiritualistic notion which made blossom and flourish the monstrous creeds of the "vitalism" of the last century.

It was in this time that a clearer view of the character and the mechanism of life was obtained. The first impulse toward establishing the properties of living matter and the signs of life was due to an original investigator, whose name now lives only in an unimportant part of the liver, the so-called capsula Glissonii. It was in his patch that Albert v. Haller later on established his doctrine of irritability and became the master of a new branch of physiology. During the lifetime of Glisson, one of his countrymen made that great discovery which has more than any other contributed to overthrow the opinions of the physicians, namely, the discovery of the blood circulation by Harvey. This discovery concluded the old combat against Galenism. It brought for the first time a convincing evidence for the inadmissibility of the contrast between organism and mechanism; it showed how organic processes were carried out in a mechanical way. And above all, it taught the real course of the most important activity on which the whole life of the human body and that of the higher animals was based. Thus Harvey has become the first physiologist, though not the formal founder of physiology.

The further development of this doctrine was first due to the young school of the city of Leyden, to men such as Bærrhaave, Albin, Gaub, Van Swieten and De Haën. In such a short way has that been obtained which is now called scientific medicine. The biological principle in medicine assumed its real importance only when the doctrine of the cell offered the possibility of developing simple fundamental notions also for the complex appearances of the whole life. These fundamental notions had a value for the whole world of life, but, of course, only if we renounced those mystical generalizations of the notion "life," which attributes life also to the whole of nature—the earth and the stars. This mere figurative life has nothing to do with our biology. It is limited to plants, animals and men. But their knowledge also permits the physician, without changing his principles, to extend his investigations over the whole territory of the living matter, and even to become an investigator in botany and zoology.

We all know, from our own experience, what an advantage it was when in our modern time the want was felt, not only to take into consideration the "*causæ vivæ*" among the causes of disease, but also to subject them to a special study. Just the worst enemies of man in the class of the animals and plants, which are frequently at the same time the smallest ones, have been directly recognized by physicians, and if we took into account the present phase of medical investigation we can say: the scientific problems of medicine are the most concentrated in the recognition of the life of the animal and vegetable cells. It is, of course, also natural and even necessary that interest should on one occasion direct a greater attention to one of these groups and on another occasion to another one. Where the darkness is greatest, there it is necessary to direct the most intense light. To-day the human cells and the most delicate processes in their interior, the wonderful processes in their nuclei and bodily substance have again received the greatest attention on the part of investigators, whereas, in the case of bacteria the chemical part of its effect occupied the investigators to a higher degree. One and the other will soon be thoroughly found out, at least in certain points. But it will solve an eternal problem of the scientific action to recognize as well the life of the "*causæ vivæ*" as that of the cells of the human body, and to derive therefrom the principles of physical education and preservation and practical therapy. I have designated the condition which now forms the chief contents of the hygienic investigations, or the combat of the cells with the bacteria.

Two lives are, indeed, struggling here against each other. The defensive combat of the animal cells against their vege-

table enemies comprises a large piece both of the individual diseases and the epidemics. Our task to help the animal cells toward the victory has been very much facilitated by the work of men who belong to the congress and whose presence we salute with particular thanks. But much remains still to be done, and a great reward awaits all who participate in these works. After Prof. Virchow had concluded, under stormy applause, his eloquent and highly scientific address, one of those men who have greatly facilitated the task of helping the animal cells toward victory, viz., Sir Joseph Lister, took the floor and spoke on the present position of antiseptic surgery. The lecturer gave a sketch of the whole development of antiseptic surgery. He fully recognized the merits which German investigators, and particularly Robert Koch, had acquired in bacteriology, and thus indirectly in antiseptic surgery.

As to the explanation of immunity, he said that various theories have been taken into consideration, namely, the wandering of the leucocytes as well as the so-called phagocytes of Metschnikoff. Prof. Lister pointed out that the theory of Metschnikoff fully explained the theory of antiseptis, and that he could not but recognize the Russian investigator's assertions.

Respecting the technical part of antiseptic surgery Prof. Lister said that he was ashamed of having recommended the use of the spray, and that in doing so he had neglected himself many an antiseptic measure of precaution which he had himself declared as necessary.

In the second part of his address, Prof. Lister spoke some words bearing on the best dressing for wounds, and made some remarks with reference to the double cyanide of zinc and mercury, on which he had already previously made a communication in his own country.

At the conclusion of the first general meeting, Prof. Robert Koch delivered a lecture on "Bacteriological Investigation." Prof. Koch said that he wished to shortly describe the present position of bacteriological investigation, and that he could not thus offer anything new to those who were familiar with bacteriology. In order, however, not to appear with "empty hands," as he had said also before, he intended to communicate some facts which he had found in his continued studies on tuberculosis and which were not yet known.

Respecting the last point, which forms the chief matter of his address, though it be still a preliminary communication, Prof. Koch said that soon after the discovery of the tubercle-bacilli, he had begun to seek for remedies which could be therapeutically utilized against tuberculosis, and that he had

continued these experiments until the present day. He was not the sole man, he said, who was convinced that there must exist a remedy against tuberculosis. It was Billroth who, in his very last publication, made a statement in this sense with all certainty, and it was known that numerous authors pursued the same aim. But he (Prof. Koch) believed that the latter had not usually chosen the true method in their investigations, as they began with the experiment in man. It was also to this method that he ascribed the fact that all that was believed to have been discovered in this way, from the benzoate of sodium up to the method of hot air, had proved to be a mere illusion.

Not with the man, but with the parasite itself in its pure cultures, we ought first to experiment on; also when remedies have been found which were able to check the development of the tubercle-bacilli in the cultures, not the cures should immediately be chosen as an experimental object, but experiments should first be carried out on animals to the effect of finding out as to whether the observations which had been made in the "éprouvette" glass were also valid for the animal body. Only when the animal experiment had proved successful one could experiment on man.

Proceeding after these rules he had examined, in the course of time, a great number of substances in order to find out as to what influence they exerted on the tubercle-bacilli which were cultivated in pure cultures, and the result was that no few substances were able to check the development of the tubercle-bacilli already in very small doses. A remedy, emphasized Prof. Koch, need not, of course, do more. It was not necessary, as was often wrongly supposed, that the bacteria should be killed in the body, but it was sufficient to check their growth and their propagation for making them harmless for the body.

Among these remedies which checked the growth of the bacteria in a very small dose were—the lecturer enumerated only the most important ones—B. Naphthylamin, Para-Toluilin, Xylidin, some of the so-called tar-colors, namely, Fuchsin, Gentian Violet, Methyl-blue, Chinolin-yellow Aniline-yellow, Aurantin, and among the metals, mercury in the form of vapor, silver and gold compounds, and it was particularly the cyanide of gold compounds which had a striking influence and surpassed all other substances in their effect.

Even in a solution of from one to two million they checked the growth of the tubercle-bacilli.

All these substances, however, failed entirely when they were tried on tuberculous animals.

In spite of this failure he did not desist from seeking for remedies which check the development of the bacteria, and he

had finally found substances which hindered the growth of the tubercle-bacilli, not only in the "épreuve" glass, but also in the animal body. All experiments with tuberculosis were, as every body who had carried out similar experiments knew, very tedious (protracted), and thus also the lecturer's experiments were not yet concluded, though he had carried them out for almost a whole year, and for this reason he could communicate on this point only so much, that guinea pigs which, as was known, were very susceptible to tuberculosis, when they were exposed to the influence of such a substance, did not show any longer any reaction to an inoculation with tuberculous virus, and that in guinea pigs which had already become affected with general tuberculosis to a high degree the morbid process could entirely be checked without the body having otherwise been affected by the respective substance.

From these experiments he did not wish to derive at present any other conclusion than that the possibility, which had hitherto justly been doubted, viz, the possibility of rendering pathogenic bacteria harmless in the living body without injuring the latter, was thus proved to exist.

Should, however, the further hopes connected with these experiments be fulfilled, and should the first succeed, in one bacterial infectious disease, in becoming the master of the microscopical but powerful enemy in the human body, we shall also soon—and he had no doubt—attain the same also in other diseases. A much promising "field of work with many tasks becomes thus opened, with tasks which are worthy of forming the object of an international emulation (contention) of the most noble kind."

The reason that he had made a communication upon this subject already now—though it was not his custom to make preliminary communications—the reason was that he wished, on this occasion, to give the impulse toward further experiments in this direction.

Prof. Koch concluded his paper by saying that he wished to finish his lecture with the desire that the forces of the nations may measure each other on this field of work, and in the war against the smallest but the most dangerous enemies of the human being, and that in this combat for the welfare of the whole of mankind, each nation may surpass the other in its successes.

On Wednesday, the 6th of August, the second general meeting took place in the "Circus Renz," and Prof. Bouchard, of Paris, read a paper on the mechanism of infection and immunity, and Prof. Axel Key, of Stockholm, delivered a lecture on the development of puberty and its relation to the diseases of the school youth, while the lecture of Prof. Horatio

Wood, of Philadelphia, on Anæsthesia had to be postponed for the third general meeting, which took place on Saturday, August 9. In this also Prof. Meynert, of Vienna, spoke on the "coöperation of the parts of the brain," and Prof. B. J. Stokvis on comparative pathology of races, and the power of resistance of the European in the tropical regions. We shall report upon some of these papers in our next letter.

THE QUESTION OF THE TUBERCULOSIS AT THE TENTH INTERNATIONAL MEDICAL CONGRESS.

The following communication contains some of the most important proceedings referring to the subject of tuberculosis in the sections of pathological anatomy, internal medicine, surgery, laryngology and hygiene.

PATHOGENESIS TUBERCULOSIS.

Prof. Pontick, of Dresden, reported in the pathological section upon the pathogenesis of tuberculosis. He pointed out that tuberculosis, as it was invariably due to an organic bacillus, was, in the first place, a local affection. For this reason tuberculosis had its first seat, which we, indeed, did not occasionally know, in those systems of organs which stood in close connection with the external world, namely, according to the series of frequency: the respiratory, digestive and urogenitary apparatus, the external layers of the skin. Every tuberculosis occurring in any other system could only have derived its origin from auto-infection by way of the lymph or the blood current. The transition from local to general tuberculosis was acquired gradually, being characterized by bacillary deposits and tubercle eruptions at the internal surface of the thoracic duct, soon abruptly, on the way of the passage of the virus into the blood vessel. There were generalizations with peculiarly modified course which force us to establish the existence of a chronic miliary tuberculosis.

Prof. Bang, of Copenhagen, discussed the question as to whether the milk of tuberculous cows was virulent when the udder was not affected. If we set aside the direct contagion when tuberculous persons were living together, the first question was to establish as to whether the eating of meat and the drinking of milk of tuberculous animals was contagious to us. The milk from an udder which itself presented tuberculous deposits was certainly contagious. There were, however, different opinions as to whether the milk of tuberculous animals with a sound udder was contagious. Prof. Bang had

carried out experiments by inoculating the milk of twenty tuberculous cows with apparently sound udders on forty guinea pigs—only in three tuberculosis was produced; seventeen remaining healthy.

The faculty of contagion of the milk was thus proportionately liable when the udder was not directly affected. This fact found out in an experimental way was assisted by the practical observations of a number of physicians, viz: that children were nourished for a long time without any damage to their health with the milk of cows which later on proved to be tuberculous. One danger was, however, always extant, particularly when such milk was used for a long time, when it was used exclusively for nourishing, and when it was drunk without having been boiled. One could thus pretend that each milk was "suspicious" and that it could not be drunk if not having previously been boiled, and the best way was not to use the milk of one cow, but the so-called "collective milk." The same was also true of butter and cheese. Less dangerous was the result of tuberculous animals, but precaution had also to be observed in these cases, and this so much the more as recent investigations had shown that the bacilli were not destroyed by fumigation, etc.

In the section of hygiene, Dr. Cornet, of Reichenhall, spoke on the question of tuberculosis and designated it as an international one, as the tuberculosis invaded all the countries in the same way, and the investigators of all the nations had made the abolition of the tuberculosis as their task.

The discovery of the tubercle-bacillus by Koch had conquered the world, but the practical consequences of this discovery had remained behind the expectations. Still to-day about 3000 men are daily dying of pulmonary phthisis, the most frequent form of tuberculosis. In most of cases the lungs and bronchial glands were first affected by the disease.

As cases in which the whole body would be pervaded with bacilli were extraordinarily rare, there could be no question of the real heredity of the tuberculosis.

The observations hitherto made upon man, and also those which we owe to veterinary science, had confirmed these statements. Among the great number of new-born men and animals which had been examined for tubercle-bacilli, there were only one or two cases where they could be proved. Indeed, the tuberculosis was also in most of the cases an affection of the later years. When it really frequently happened that children of tuberculous parents also suffered from tuberculosis, this was simply due to the frequent opportunity of contagion, which was, perhaps, also, in part, favored by inherited pre-

disposition for the admission of pathogenic germs. Where people did not live together, nothing could be observed of a propagation of the tuberculosis from the parents to the children. In an orphan asylum of Nürnberg one child died of tuberculosis within eight years, though the parents of many of the children who were there had died owing to tuberculosis. As to the danger of contagion itself, it was present only there where patients were dwelling, and only when the sputum of the patients was dried up.

As long as the "sputum" was still moist the bacilli could not leave it. In the same way the error had to be opposed to that the air expired by the patient contained morbid germs; this was quite impossible. Also in the free air the bacillus became innocuous in a short time, as it was overvegetated and killed by other bacteria and germs of putrefaction. It was, indeed, very possible that general weakness of the body should facilitate the entrance of the bacilli, yet many cases were known where quite robust men were attacked by the disease, whereas weak persons who were living in the surroundings of patients remained intact. This was illustrated by the fact that in the army—where a high degree of corporeal strength was certainly condensed—a higher rate of deaths owing to tuberculosis was stated than in people of the same age among the business classes. All these facts furnished the basis for the measures which should be taken for hindering the spread of the terrible affection.

First, the patient must have spittoons which are filled with water, and a disinfection of the sputum was then superfluous. Spittoons filled with sand or sawdust had to be avoided, as these were favoring the drying-up process. The establishing of disinfection houses and offices for the control of the milk was equally necessary. Meat of quite tuberculous animals ought not to be sold. If only one organ of the animals was affected, the sale of the meat could be permitted, but the meat ought emphatically to be declared as being of a lesser value. The people ought to be taught in a popular way all these measures, then will be attained that aim which Virchow had given to medicine, namely, to overcome tuberculosis in the same way as it has overcome scorbutus.

Prof. Sormani, of Pavia, furnished his statement in the following sentences, which should form the basis for international transactions. According to these the rooms of sanatoria for tuberculous diseases to which a great number of consumptive patients resort every year (*hôtels, chambres, gasures, etc.*), had to be under the management of technicians, who were appointed by the respective sanitary authori-

ties, and ought to be thoroughly disinfected in regular intervals. Also a disinfection of the railway cars and the steamers should be ordered.

Prof. Sormani also put the question as to whether it would not be good to prohibit the transportation of consumptive patients on steamers, as in ship rooms a closer contact with such patients could not be avoided. The importation and exportation of tuberculous cattle had to be prohibited under all circumstances; furthermore the large manufactories in which there was danger of contagion should be carefully watched.

[To be continued.]

SCIENTIFIC PROCEEDINGS OF THE ACADEMY OF MEDICINE AND SURGERY.

RICHMOND, VA., September 23, 1890.

Dr. W. W. Parker, President, in the chair. Dr. James N. Ellis, reporter.

Dr. John N. Upshur, Professor of Materia Medica in the Medical College of Virginia, honorary member of the State Medical Society of West Virginia, etc., the appointed leader, read the following paper:

PLACENTAL DISEASE AS A CAUSE OF PREMATURE LABOR.

The sparse literature on placental pathology makes a discussion of the lesions of this viscus one of no little difficulty, and it is only by clinical observation, and the legitimate deductions from such clinical facts, that we can arrive at conclusions of a practical nature, these being proved only by the successful issue of treatment founded at best upon theory suggested by these clinical facts. Reflections on this subject were suggested to the writer by a case which is made the text of this article and which was one of great interest and concern to him. The welfare of whole family connections, based upon pecuniary considerations or the domestic happiness which often centers in fruitful issue, can not be over-estimated.

Case.—I was called to see Mrs. Blank, August 5, 1888, in her third pregnancy, advanced to the fourth month; æt. 29, blonde, health always robust. She had lost two children at the beginning of the seventh month, being attended by one of the leading physicians of this city. Careful inquiry failed to elicit the history of any imprudence on her part—a jar, a fall, or any tangible cause for the premature labor. The history of both the first and second pregnancy was identical with the third.

There was no swelling of hands or feet, no headache, and careful analysis failed to disclose the presence of albumen in the urine, or any functional derangement of any organ whatever.

She was enjoined to be as quiet as possible, avoid going up and down stairs, to keep early hours, and given tinct. of the chloride of iron and uterine sedatives, and watched most carefully and anxiously. Soon after entering the sixth month the movements of the child became each day more feeble and irregular and she began to complain of a weight in the hypogastrium; motions of fœtus ceased and labor came on at the beginning of the seventh month, October 28. Labor easy and rapid. Fœtus cried feebly once or twice, presented a swollen appearance, with more or less sclerotic condition of skin, cord empty of blood, placenta firmly adherent, requiring nearly three-quarters of an hour to remove it. Uterus contracted well and firmly. The placenta was *very soft*, pale and anæmic—so soft as to drop to pieces by its own weight or a portion of it.

Patient became again pregnant early in January, 1889. Carefully reflecting on the condition of the placenta and the history of the two previous pregnancies and deliveries, I concluded that the cause of the death of fœtus and premature delivery was a latent endometritis, stimulated to active progress by pregnancy and the implantation and development of placenta—the inflammatory condition extending to the placenta, producing fatty change, cutting off the circulation of the fœtus, and consequent death so soon as the pathological change had progressed far enough. All history of syphilis could be absolutely eliminated, because both parents were exceedingly anxious for issue, and I am confident that I elicited from the husband the whole truth as to the history of his sexual life. He had once had a mild gonorrhœa previous to marriage—suspicion here, you say, of urethral chancre, but if so why did he not have bubo and secondary symptoms at the time and tertiary symptoms succeeding? None of which he has ever had, nor has he ever had any syphilitic treatment.

The woman herself is absolutely above reproach. So soon as I was informed of the occurrence of pregnancy for the fourth time, I put the patient upon the most active alterative treatment of the bi-chloride mercury, red iodide and chloride of gold and sodium, varying these alteratives and keeping up the treatment for six months. Patient also drank lithia water freely. I desire in this connection to especially commend the chloride of gold and sodium as an alterative. Its action in the dose of 1-8 gr. to 1-20 gr., in combination with extract of one of the bitter tonics, is in many respects similar to that of the iodide of potassium, but I believe it has a special influence in modifying

inflammatory conditions of the endometrium, and in my hands has certainly been productive of very great benefit. The patient progressed beyond the usual danger point, and was delivered safely at term; labor easy and rapid; child a magnificent specimen and free from every blemish; is now more than a year old and has been singularly exempt from the usual infantile maladies. The placenta was healthy.

Remarks.—Galabin speaks (page 298) of inflammation of the decidua, which may arise from previous endometritis existing prior to conception, and it may exist in the vera, or reflexa, or serotina. He says the study of inflammation in this situation is difficult because the cell proliferation of the decidua is analogous to that which takes place in the inflammatory process. It is the inflammatory process in the decidua serotina which chiefly effects placenta. Symptoms of this trouble are soreness and tenderness over the uterine globe, but may be entirely absent. The same author above quoted says that fatty degeneration may be partial, and then the fœtus may be born alive, but that when "*extensive it may directly kill the fœtus by cutting off the supply of blood.*" Parvin (Science of Obstetrics, p. 275) speaks of the distinction made by Dr. R. Barnes between fatty degeneration and fatty metamorphosis: "The former begins in the living, the latter is found in the dead tissues." In Cazeaux and Tarnier (p. 551) is found the expression of doubt as to the ability to fix the symptomatology of this lesion, there being only evidence of uterine congestion manifested in some cases by weight in lower part of abdomen, pain in loins and down the thighs. But these symptoms may be present when other placental lesions exist.

There may be apoplexy, sclerosis, syphilitic disease, cancer, etc. It is not pertinent to the subject under discussion to consider these, nor will time or space permit. I have been lead to consider the subject from its present standpoint because of the success attending the treatment of repeated premature delivery, based upon the theory enunciated, and because in the light of such success it may point the solution to some case of similar difficulty.

Supplementary to his paper, and in reply to questions, Dr. Upshur called attention to Galabin's opinion that a peculiar pinkish color of, and the presence of watery gummæ in, the placenta was evidence of syphilitic disease of that organ. But he is satisfied of the absence of any syphilitic taint in the case reported. The success of the alterative treatment might also suggest syphilis. But he has seen decided improvement in simple endometritis from the exhibition of the chloride of gold and sodium. He ascribes the good result in the above case

principally to the use of that salt. The general health of the patient was good.

Dr. Hugh M. Taylor was reminded of a patient who lost her first three children at about the eighth month; in all of these pregnancies preventive treatment was adopted. Subsequently she had three children, no preventive treatment was attempted and all of the last three children were born alive, strong, and robust. Thinks we sometimes credit medicine with alterative influence which it does not deserve.

Dr. Moore does not think that conception can take place in a uterus which at time of connection is the subject of corporeal endometritis. The leucorrhœa consequent upon such diseased condition effectually impairs the vitality of the spermatazoa or by its flow washes the ovum from the uterine cavity. But even if conception takes place it is impossible for gestation to progress safely, and abortion or miscarriage results. Where conception takes place in a healthy uterus and endometritis subsequently occurs the pathological changes consequent upon inflammation of the endometrium preclude the possibility of a continuation of pregnancy to term. Where the neck only is involved, conception and delivery at term may occur. But when both neck and body are diseased, non-conception is the rule. Placental disease proper is frequently secondary; various morbid conditions of the blood bring about abortions, such as continued or the eruptive fevers and syphilis—especially secondary. In tertiary syphilis the patient frequently goes to full term. Congestions and other interferences with the circulation, occasioned by flexions or versions, produce fatty or amyloid degeneration, or general uterine contraction sufficient to detach the membranes. Retroflexions are especially fruitful in these bad results.

Dr. Upshur does not think that the failure to abort, in the case of his patient, can be ascribed to coincidence, as suggested by Dr. Taylor. He referred to other cases of non-pregnant endometritis in his practice that were benefited by this treatment. A case yielding to iodide of potassium or bi-chloride of mercury does not necessarily imply syphilitic taint. It is not common for conception to take place where there is an existing endometritis, especially of the cervix. But where you have latent endometritis before marriage it may be developed by pregnancy. This patient had a dysmenorrhœa before marriage, but was not treated for it, as conception took place so quickly he did not have the opportunity.

REPORTS OF CASES.

Dr. Upshur had been recently called to see a lady of unusually robust health. He found her with decided trismus,

spasmodic contraction of both flexor and extensor muscles of hands and of lower extremities. Spasms both violent and painful, lasting several minutes, and excited by slight draft or current of air. There was no wound to give origin to suspicion of traumatic tetanus, and no probability of her having obtained strychnia. But it seems she had eaten a few raw oysters the day before, the weather being warm. The convulsions were accompanied by choleraic symptoms, nausea, vomiting, and purging, but no collapse. Administered morphia hypodermically and chloroform by inhalation, and further controlled them by 20 gr. doses of bromide of potassium every two hours. Is satisfied the convulsions were due to eating unsound oysters.

Dr. Parker reported a case of convulsions in a mulatto child whom he had relieved of an attack of nausea one month before by the use of carbolic acid. There were four or five convulsions daily, accompanied by a profuse flow of saliva. Suspecting worms, a vermifuge was administered, with negative result. Then gave an emetic of sulphate of zinc, without relief. The fourth day was present during convulsions, which were confined to upper portion of body and upper extremities. Thinks them due to ingestion of some insoluble substance. Was rubbed along spine with croton oil last night; better this A. M. Dr. Hoge thinks the convulsions due to some preputial trouble.

Dr. Ed. T. Baker reported a case of *angina pectoris*, supposed to be caused by depressed fracture of skull. "Last Wednesday," said the doctor, "I was called to see a white man, æt. 30, height 6 feet 2 inches, weight 205 pounds, very muscular, occupation striker in a blacksmith shop. Prior to 1884 (when he received the injury to his head) he had not seen a day's sickness in his life. This injury left him with a depression on the left side of his head on a level with the top and one inch posterior to the margin of ear, and one and one-quarter inches from tip of mastoid process. The depression measures one inch from upper to lower margin, and one and one-quarter inches from anterior to posterior margins. Was confined to his bed eight months after receipt of injury. After he was able to go about he had an attack of *angina pectoris*, and has had as many as three a week since that time. Some times will not have one for a month, when they return with increased severity. Has been treated by a number of doctors without relief. He notices that he has had more attacks and they have been much more severe in character since he had la grippe last March. A stethoscopic examination of his chest revealed the heart sounds normal, but a little weaker than seemed in keeping with his fine physique and general strength.

He has some dyspeptic symptoms, for which elixir lactopeptine was prescribed.

My objects in reporting this case are: 1. To get the opinions and advice of the older members of the academy in regard to the advisability of using nitrite of amyl in this case, as the patient notices that when he gets very warm and especially when he lowers his head in stooping that it gives him pain in the back of head just above neck and will become unconscious unless the upright position is immediately resumed. As amyl nitrite produces about the same effect (vertigo, dizziness, and flushing of the face—in other words, temporary hyperæmia), is it not advisable to use it, and thus substitute unconsciousness due to congestion of brain for angina pectoris? 2. Can we attribute the angina pectoris to the blow on the head, which may have fractured the inner table of the skull, and by irritation of that portion of brain so interfered with the action of the pneumogastric nerve as to cause the heart trouble? 3. Could he not be operated on and the depressed bone raised from the brain and thus relieve both conditions? He says that he has been repeatedly told by physicians that the wound is too low down to be operated on. Is now taking sod. bromide, compound spirits ether and aromatic spirits ammonia three times daily and every two hours when threatened with attack." Dr. Baker further said that the attacks were not more frequent in the recumbent position or at night. Mind clear, and that he thinks there is chronic congestion or inflammation about brain.

Dr. Parker thinks it a clear case for operation.

Dr. Upshur saw a case that, in regard to epilepsy, was similar to Dr. B.'s. The skin over the temple was cut by a falling timber. No ascertainable depression. Epileptic attacks, two or more daily, soon followed, dulling mental action; was trephined, and upon inner table of button of bone removed appeared a deposit of callus, indicating that there had been fracture. No convulsions for week succeeding operation, but at end of that time fell forward on face—dead. Another case was that of an inmate of the Central Lunatic Asylum; was struck on head with an axe in 1862, and piece of bone driven on brain—became violently insane, but no epileptic convulsions. Was trephined by Dr. Hunter McGuire in 1869—perfectly rational upon recovery from operation, and took up thread of events from time was struck, the intervening period being a blank; subsequently died of cerebritis.

Dr. Hugh M. Taylor had recently a case somewhat similar to that cited by Dr. B. A railroad employé received injury in same region, remaining unconscious for thirty-six hours thereafter, when mind cleared. No fracture of skull diagnosed.

Suffered pain over frontal region, left eye blood-shot and protruded—evidently some cerebral lesion; continued this way for two or three weeks. In six weeks began suffering from vertigo, increased pain, and depression of cerebral functions amounting almost to coma. This was followed by discharge of pus from ear, "Cheyne-Stokes" respiration. Diagnosed abscess of brain, probably due to depression. After consultation with Dr. C. W. P. Brock, decided to trephine. But patient died night before day selected for operation. Post-mortem discovered cerebral abscess containing ounce of pus. Is satisfied he should have trephined.

Another case of abscess of the brain was reported by Dr. M. D. Hoge, Jr. Two weeks ago he saw, in consultation, a workman with suspicious history of previous syphilis. Had been semi-comatose for two days; abscess of the skin on right frontal eminence; left leg paralyzed; bowels and bladder under complete control; respiration accelerated; pulse very quick and small; temperature 104 deg. F. On account of feeble and uncertain condition of heart it was decided not to trephine. Put upon drachm doses potassium iodide every four hours; sixteen hours later he died, paralysis having rapidly extended to all four extremities. Skull was trephined *post-mortem* at point selected in discussing operation the day before; dura mater pale and thickened, a smoothly lined pus cavity lying beneath, of the size and shape of guinea-fowl's egg, occupying right frontal lobe and filled with thin offensive fluid. There was no apparent communication between external abscess and interior of cranium.

Dr. Hugh M. Taylor thinks the cerebral abscess may have been secondary, as subpericranial suppuration may find its way into the skull by extension along the venous sinuses leading into the cranium. A cerebral abscess not infrequently occurs as a result of phlebitis of the diploic veins.

Dr. W. W. Parker, in calling attention to the occasional presence of serious brain trouble without significant symptoms, spoke of a patient who suffered for some days with frontal headache and then fell suddenly dead. Post-mortem revealed an ounce of pus just back of frontal sinus.

Cerebral Abscess Frequent Cause of Death in Children.—Saw a child with bluish boils about neck, which he opened. Was surprised to hear of death from convulsions next day; post-mortem showing extensive softening of brain, which had evidently been diseased for some time. Another case was that of a ten-year-old boy, whose head was fractured by a wagon wheel passing over it, death occurring several weeks subsequently; mind clear to within few hours of death. Post-mortem showed disorganization of whole top of brain. Query: Where is the seat of intelligence?

The doctor then spoke of several cases of atypical typhoid fever that have recently come under his observation, in which there was no heat of skin, no furred tongue, and no loss of appetite for fluids, attended with emaciation and prostration. One terminated in fifteen, another in thirty days. In treating typhoid the points to be guarded are the brain, lungs and bowels. Gives an abundance of good milk and toddy. Gave a girl one quart of whisky every day for six weeks. Thinks it greatly reduces temperature. For the diarrhœa he gives a mixture of turpentine, kino, paregoric and bismuth.

Dr. J. W. Henson reported a case of fever which he was unable to classify. There were at first griping pains over the abdomen which was somewhat distended, but no tenderness or pain on pressure. Fever ran a regular course of morning remission and evening exacerbation; morning temperature from 99 deg. F. to 99 deg. and a fraction; evening from 100 deg. F. to 100 deg. and a fraction; occasionally entire absence of fever for days. Pulse rapid and weak; suffered greatly at times from cardiac weakness and a sense of impending death. Revived by stimulants; slight delirium at times; suspected lung trouble, but physical examination gave no evidence thereof. Treated at first by mercurial purgative, followed by quinine, with a tonic of iron and arsenic and dilute nitro-muriatic acid, milk diet, and later, whiskey in frequently repeated doses. Fattened while in bed. Suspecting local influence as a cause, sent her to country for month of June. Menstruated regularly till beginning of sickness, when she missed one or two periods. No evidence of scrofula. Was first taken sick last December, and still has fever, but is otherwise apparently well. Dr. W. S. Gordon had recently been consulted by a lady just from a malarial district, where she had been nursing a typhoid patient. Had fever, and had been taking large doses of quinine. In each week she would have fever for four days and be free from it the succeeding three. Examination of lungs discovered slight subcrepitant rale at apex of right lung. No cough, but emaciated; no history of previous pneumonia. Put on creosote and whiskey; improvement. Sent her to country, and on return still has slight fever.

Dr. Parker is satisfied that phthisis may exist in its earlier stages when there is no cough and no evidence of its presence is furnished by physical signs, and thinks Dr. Henson's patient has consumption.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The next session of the Southern Surgical and Gynecological Association will be held in Atlanta, Ga., on November

11, 12, and 13, 1890. The president of this association is Dr. George J. Engelmann, of St. Louis, Mo.; vice presidents, Dr. B. E. Hadray, of Galveston, Texas, and Dr. Duncan Ewy, of Nashville, Tenn. Dr. W. E. B. Davis, of Birmingham, Ala., is secretary. Members of the medical profession are cordially invited to attend. The following partial list of the papers to be read may give some idea of the value of the coming session:

"How Shall We Treat Our Cases of Pelvic Inflammation?"

R. B. Murray, M. D., Memphis, Tenn.; "Further Study of the Direct and Reflex Effects of Lacerations of the Female Perineum," J. H. Blanks, M. D., Nashville, Tenn.; "Abdominal and Pelvic Surgery in America," Joseph Price, M. D., Philadelphia, Pa.; "Intra Ligamentous Ovarian Cystoma," Cornelius Kollock, M. D., Cheraw, S. C.; "Anatomy and Pathology of the Ileo-Cæcal Region," Richard Douglas, M. D., Nashville, Tenn.; "The Best Route to the Bladder in the Male for Disease or for Foreign Bodies," Hunter McGuire, M. D., Richmond, Va.; "Saprapubic Cystotomy in a Case of Enlarged Prostate," Wm. H. H. Cobb, M. D., Goldsboro, N. C.; "Indications for Cholecystotomy," A. M. Owen, M. D., Evansville, Ind.; "Is Gonorrhœa Ever a Cause for Pelvic Inflammations?" J. R. Buist, M. D., Nashville, Tenn.; "Treatment of Urethral Strictures by Electricity," W. Frank Glenn, M. D., Nashville, Tenn.; "The Surgical Treatment of Empyema," J. A. Goggans, M. D., Alexander City, Ala.; "Rectal Medication in Pelvic Troubles," W. Hampton Caldwell, M. D., Lexington, Ky.; "Conservative Surgery in Injuries of the Foot," J. T. Wilson, M. D., Sherman, Texas; "The Management of the Infantile Prepuce," George Ben. Johnston, Richmond, Va.; "Further Observations on the Dangers of Operative Delay in Prostatic Troubles, with Personal Experience," R. D. Webb, M. D., Birmingham, Ala.; "Clinical History of the Epicystic Surgical Fistula, with Cases," Jno. D. S. Davis, M. D., Birmingham, Ala.; "Cholecystotomy," W. E. B. Davis, M. D., Birmingham, Ala.

LAPAROTOMY VERSUS ELECTRICITY IN EPTOPIC PREGNANCY.

An Abstract of a Paper read by Dr. Wathen, of Louisville, before the Tri-State Medical Society of Tennessee, Alabama and Georgia, at Chattanooga, October 15, 1890.

Dr. Wathen said: Electricity, the only feticidal means now recognized as orthodox by physicians who practice destroying the life of the fetus in ectopic pregnancy without laparotomy, is no longer used for this purpose where the

pregnancy has continued beyond three and a half or four months, and is seldom used after the third month. At this time the fetus can not be killed except by electro-puncture, and the complications and the deaths consequent to this practice have been so numerous that the most radical advocates of electricity are afraid to introduce the electrodes into the gestation sac. The use of electricity in extra-uterine pregnancy is practically confined to the United States, and while it is advocated by men of recognized ability and learning in obstetrics and gynecology, I am constrained to believe that very soon it will have no support.

The immediate and subsequent results of electricity as a feticide are put in the most favorable attitude in a paper by Dr. Brothers in the February, 1890, issue of the *American Journal of Obstetrics and Diseases of Women and Children*. Every fact supposed to favor its use is made to sound its praise extravagantly, but the many results that speak volumes against its use are quietly passed by, or an effort is made to brush them aside. Still the conclusions of the author furnish the strongest proof in favor of laparotomy.

These statistics, compared with the statistics of laparotomy, show conclusively that the use of electricity in extra-uterine pregnancy is more dangerous, granting that there was no error in diagnosis.

But just here we have another argument in favor of laparotomy, for the difficulty, and sometimes the impossibility, of diagnosing extra-uterine pregnancy in the early months is so manifest to experienced physicians, that it would be ridiculous to claim that in all these cases pregnancy existed; while in the cases where laparotomy is done a diagnosis may positively be made by seeing the embryo or the chorionic or placental villi. If the embryo or fetus in an extra-uterine pregnancy is killed by electricity, a more or less diseased condition of the pelvic structures is left that endangers the health or the life of the woman; the dangers usually being increased as pregnancy advances; but if a laparotomy is done there is no obstructed tube or other pathological condition left, and if the woman recovers from the immediate effects of the operation she is entirely cured. Her life is no longer in jeopardy because of the danger of pelvic abscess, sepsis, or exhaustion following an effort to discharge the suppurating contents of the gestation sac through fistulous tracts into the rectum, vagina, bladder, or through the abdominal walls. If we could eliminate the cases where there was an error in diagnosis we would find that the mortality from the use of electricity and the bad after-results are far in excess of what follows laparotomy in the practice of experienced operators.

In an examination of Brothers' report of the subsequent behavior of twenty-five cases observed at periods varying from one to eight years after the employment of electricity, we must be impressed with the fact that at least 50 per cent. of all cases carefully observed had thickening or distinct tumor, that may at any time require laparotomy to save the woman's life, or to cure her of confirmed invalidism.

In cases where laparotomy has been done the mortality has not exceeded 5 per cent., and nearly all the women that recovered from the immediate effects of the operation were permanently cured. Most of these operations were done after rupture of the sac, where the conditions are not so favorable in laparotomy work.

Laparotomy, in all cases where the advocate of electricity would defend its use, is so simple and so free from danger that I believe an experienced operator could save at least 95 per cent. of his patients—probably 99 per cent. And before the end of the third month there is no condition requiring laparotomy where the operation is more easily done or the immediate or subsequent dangers fewer. In fact, its simplicity, compared with the operation for many pathological conditions in the pelvis is so decided, that in the practice of a successful laparotomist, who observes the rules of clean surgery and adopts the most approved technique, the patients should recover. Tait's operations have been for ruptured tubal pregnancy, and he reports but two deaths in more than fifty patients. The first woman he operated on died because he did not then know the correct technique in such cases, and his second death was where the woman was in fatal shock before the operation.

One of the reasons given in favor of electricity is, that these women can not always be operated on by an experienced laparotomist. Nor can electricity be always used by men who are familiar with its successful use in such cases. If it is necessary to refer the woman to some specialist in laparotomy, it will as often be necessary to refer her to some specialist in electricity, who has all the electrical appliances necessary for good results in such work.

The services of an experienced abdominal surgeon may be obtained as easily as the services of a man experienced in the successful use of electricity. The operation is so similar to the operation for the removal of enlarged and slightly adherent ovaries, that a description of it would be unnecessary. If the sac has become adherent to any pelvic structure, it should be gently but quickly separated and ligated at its base with a double ligature, being careful to include both the distal and proximal ends of the vessels.

In conclusion I wish to show you two specimens which will illustrate some of the phases of extra-uterine pregnancy. The first is a placenta with the fetus attached, showing the ovaries and tubes successfully removed by me some months ago. This is a tubal pregnancy that ruptured into the folds of the broad ligament. The second is a uterus with its adnexa showing a ruptured tubal pregnancy into the abdomen at about the sixth week. This was removed post mortem by Dr. Kelch. The rupture occurred thirty-six hours before death. Dr. Kelch made a correct diagnosis soon after the rupture and urged the patient and her family to allow a laparotomy. This was refused until an hour before her death, and when I entered her room she was dying. Her life could have been saved had she consented to an early operation.

POSTPONEMENT.

We are informed by Dr. S. H. Rogers, secretary, of Memphis, Tenn., that the committee of arrangements had postponed the next meeting of the Tri-State Medical Association (of Mississippi, Arkansas and Tennessee) until November 19 and 20, 1890.

DR. ROBERT BATTEY.

At the recent meeting of the Tri-State Medical Society, (of Alabama, Tennessee, and Georgia), held October 14, 15 and 16, 1890, Dr. Robert Battey, of Rome, Ga., was elected president. We congratulate the eminent gynecologist upon this merited distinction.

EDITORIAL ARTICLES.

MR. TAIT'S ARRAIGNMENT OF MR. LISTER.

Audi alteram partem.

At the meeting of the International Medical Congress in Berlin, Mr. Lister read his paper on Antiseptic Surgery. In this address he maintained as strenuously as he had ever done the general principles of the antiseptis, but candidly admitted that his further study of subject and more extended practical experience had made clear to his mind the uselessness, nay, even the unscientific foundation of certain details upon which

he had formerly laid emphatic stress. Since the honest confession of these errors has recently been magnified into a positive abandonment of his former position, we think a fair statement of his changed views should be attempted before we essay to reply to the very vigorous attack of the great opponent of Mr. Lister's methods.

In Mr. Lister's address great importance is attached, and properly, we think, to the researches of Metschnikoff regarding the action of the phagocytes. While the methods of Koch and others have enabled us to learn during the last nine years a vast deal concerning the nature and habits of the micro-organisms which invade our bodies, "a new and surprising light has been thrown within the same period upon the means by which the living animal defends itself against their assaults." These observations of Metschnikoff, Mr. Lister thinks, "serve at once to explain much that has hitherto been mysterious in the relations of micro-organisms to wounds. In an address delivered last November, Mr. Lister makes use of the following language: "I believe I was the first to direct attention to the antiseptic agency of living structures; * * * without it surgery in former times would have been impossible.'"* Long before the days of the germ theory, the great John Hunter had stated practically the same thing when he gave his definition, "Vitality is the power which resists putrefaction." Mr. Lister calls this "antiseptic agency," and Metschnikoff has given it scientific expression in the word "phagocytosis." This natural, vital resistance, or whatever else we may call it, is admitted by all, even by Mr. Tait, when he calls Metschnikoff's phagocyte theory "a simple, still all-important *fact*."

While Lister, then, long ago recognized the important influence of this "vital resistance," still his lamentable experience in Glasgow, convinced him that these unaided powers of nature were oftentimes utterly insufficient to prevent disastrous results. Purulent infection had long been so generally prevalent in hospitals and was so uncontrollable that Sir James Y. Simpson coined for it the word "Hospitalism." The manful struggle of Mr. Lister against this terrible condition of things, his early recognition of the vast importance of Pasteur's germ researches,

**British Medical Journal*, November, 1889.

his discovery of the true explanation of wound infection and his successful prosecution of investigations to find means for their prevention, are all now matters of common knowledge.

Lucas-Championnière, the Lister of France, remarks: "Nelaton, who was esteemed one of the most fortunate of operators, was accustomed to say that the man who should discover the means of suppressing purulent infection would deserve a statue of gold," and he very justly adds that this statue should be raised to Mr. Lister. No one, we venture to assert, who will make an honest study of the surgical results of Mr. Lister in Scotland, of Lucas-Championnière in France, of Volkmann in Germany, of Saxtorff in Denmark, before and after the introduction of antiseptic methods, can fail to admit the immense service rendered by Mr. Lister.

Mr. Tait complains that Mr. Lister and his followers "never bound themselves to any distinct expression;" that with "microscopic facts Mr. Lister alters his nomenclature," and that, as to details, he has shifted so perpetually as to make these details of no value. Well, let us see. First, he experimented with carbolic acid. This gave improved results, but experience discovered some serious objections to its use: it was irritating, and on account of its volatility, results were not sufficiently certain. Search was made for more efficient agents. Koch and others made experiments and suggestions. Schede and Bergmann introduced corrosive sublimate. Mr. Lister experimented with it, became satisfied of its great value and carried out laboratory investigations in conjunction with clinical tests. He used and commended successively simple corrosive sublimate solutions, then solutions of sal alembroth and albuminate of mercury, made first with the corrosive sublimate and afterward with sal alembroth. Though he found these improvements, experience pointed out important objections. For some purposes the solutions of mercury still possess the confidence of Mr. Lister, but his prolonged and perplexing experiments to find a suitable substance for dressings, show his partial dissatisfaction. The so-called double cyanide of mercury and zinc seemed, even after a year's use, in his own words, to be satisfactory; but Mr. Dunstan made a suggestion which he at once recognized as an *improvement*, and Lister adopted it.

Bergmann and others sterilize by heat and use no antiseptics in their dressings, and get brilliant results—a still further simplification of the process.

Mr. Lister formerly thought the spray necessary, but in his Berlin address says he is ashamed of having ever done such a useless and absurd thing. He substituted frequent irrigation. He formerly thought drainage absolutely necessary, and rarely closed wounds without formal provision for it: in his Berlin address, he speaks of the possibility of dispensing with irrigation, using aseptic sponging instead, and of completely closing and hermetically sealing wounds, without drains. This the Germans have already accomplished. But there is still much difference of opinion regarding details. Bergmann thinks hemostasis a *sine quâ non* as an antiseptic measure; Schede purposely allows a wound cavity to fill with blood, regarding this "moist blood clot" a decided advantage and assistance in rapidity of healing and subsequent result. Both have had admirable results, but Schede's are, in view of Tait's contention, especially striking.

Further, Bergmann employs irrigation; Landerer recently proposed dry antiseptic sponging without any irrigation, results of both being good. Schmidt's antiseptic occlusion method (with iodoform collodion) has given excellent results.

Some surgeons find catgut extremely useful, notwithstanding the protest of Kocher, after immense experience, that it can not be rendered reliably aseptic. Silk can always be relied upon; catgut nearly always, but not always. But why frequently if not *always*? Let us restate the matter in Mr. Tait's own words: "If a thousand people drink the same germ infected water, only a hundred or so will be affected." Dr. Fowler, we believe, has given us a method for making catgut *always* reliable, but this may prove erroneous and other methods must be sought. Does all this show vacillation and dogged maintenance of false surgical theories? Not at all. It rather indicates the most tremendous earnestness in the search after truth. But surely there has been no overthrow of principles, upon which the Listerian theory was originally and still is based. When Mr. Lister recently asserted "that floating particles in the air may be disregarded in our surgical work," does he give up any for-

merly maintained surgical principle? Not at all. Formerly, it is true, he attached great importance to the atmosphere as a source of infection, believing it loaded with germs, but experience has led him and most surgeons to modify materially this opinion. This source of infection must still be regarded as *possible*, and under obvious circumstances quite a source of danger, but ordinarily not sufficient to call for spraying of atmosphere, which is certainly inefficient, and, so far as the wound is concerned, objectionable. Fumigation beforehand would be effective, if an efficient fumigant substance could be obtained. Experience now has shown that the avoidable sources of infection are: hands, surfaces of patient, instruments, sponges and the like. *But*, these are sources of danger simply by reason of the germs in contact with them. The principle is yet supreme.

If, then, all this apparent variance in opinion and practice does not really seriously militate against the truth of Mr. Lister's theories, there ought to be some way of reconciling discordancies of antiseptic methods and of explaining Mr. Tait's marvelous results without antiseptics. We regard Mr. Tait as the most remarkable operator in the surgical world to-day, and we believe his statistics perfectly reliable and his beliefs thoroughly honest, though he is not always quite fair in referring to the practices of other surgeons, as we shall show. Tait very tersely says: "I adopt none of Lister's so-called antiseptic precautions because I have no fear of germs and never had."

We believe we do not misstate the practice of Mr. Tait in the following words: (1) A high degree of ordinary (as opposed to antiseptic) cleanliness of room, patient, instruments, sponges, and dressings; (2) the use of hydrant water in large quantities, instead of wiping* with sponges, which is irritating; (3) remarkably short duration of operations; (4) minimum exposure (through small incisions) of abdominal contents; (5) minimum assistance of assistants; (6) saline purgatives, etc.; (7) drainage. This being his practice, what is his explanation?

Take away pabulum and germs need not be feared. He admits the "necessary germs," but insists they can

*It is useless to lay much stress on this point, since Tait clearly does not mind wounding the peritoneum

do no harm without the necessary pabulum. If, then, he does not attack the germs, his efforts must all be directed toward removing the pabulum. How is this done?

By cleansing the peritoneum, providing for drainage, and saline purgation, mentioned in order of importance. Let us analyze now these procedures. The first, everybody, be he follower of Lister or disciple of Tait, will admit, the only difference being the fluid used for cleansing, some using chemically antiseptic fluids, Tait using mechanical antiseptics, that is, antiseptics by quantity and force of fluid. Both, however, are antiseptic measures. Tait washes out pabulum and lurking germs in this way, but undoubtedly *may* introduce some germs, only the few, however, which are to be found in the hydrant water. His drainage tube, when used, drains off serum as it pours out and there is no chance for them to develop, ordinarily; when, however, serum or blood accumulates (as is most likely where drainage is not provided for), the germs multiply and peritonitis supervenes. Here Tait has rendered surgery a great service, by showing that purgation is infinitely better than the opiate treatment of some years ago.

The peritoneum, especially the diaphragmatic portion, is most active of all tissues in absorbents, the cavity itself being by many regarded as a lymph space. Purgation unloads the abdominal vessels. The portal capillaries are depleted, and they take up more or less fluid from the peritoneum. The whole vascular system is partially drained into the intestinal canal, the general tension is relieved, the thoracic duct empties more rapidly into the subclavian vein, and the peritoneal absorbents work to better advantage and take up quickly the peritoneal serum, hurrying away with it numerous germs: the germs left behind being deprived of sufficient pabulum are largely killed; those that survive are easily prevented from doing harm by the "vital resistance," or if we wish a more scientific expression, by the phagocytes. If purgation do not act in this way, how does it act?

Since Tait acknowledges the germs at all, how illogical to decline to employ antiseptic measures in order to remove the remaining risk! How admirable would be his method did he but add this to his present plan!

The more active absorbent power of the peritoneum (which we believe Dr. Morris first suggested) is a large factor in giving Mr. Tait his success. We wish now to show how much real harm Mr. Tait has done and is doing to general surgery by insisting that antisepsis is an absurdity. If the absorption activity were as great elsewhere, then the results would be as good. But the experience of Lister, Volkmann, Championnière and others was marked by frightful mortality and disease. These surgeons were then as "clean" as Tait now is. Therefore, the absorption activity can not be as great elsewhere as in the peritoneal cavity. We know, too, actually that this is true. The conditions, then, being different, if Mr. Tait's dictum has sufficient influence, he will have surgeons opening the knee joint, for instance, with the same boldness as he opens the sacred cavity. For ourselves, we must condemn Mr. Tait for giving advice fraught with inevitable disaster.

Let us now endeavor to formulate the surgical *facts* upon which Mr. Lister has founded his antiseptic theory. Mr. Tait calls the theory an antiseptic *fact*, without considering that there are *several* facts that go to make up Lister's theory, just as *his* *pabulum* theory rests on two or more *facts*. What are Mr. Tait's facts and theory?

Fact 1. Germs, the active agents.

Fact 2. Pabulum, the decomposable material.

Fact 3. Vital resistance.

Theory stated in his own words: "Get out all the decomposable matter and you can let in the germs freely."

Mr. Lister's theory —

1. Germs, the active agents.
2. Antiseptics destroy or inhibit germs.
3. Tissue resistance.

Theory as stated by Mr. Tait: "Keep out the germ and you may leave blood clot (and other matters) to take care of themselves." Schede's practice proves that with extreme care this can be done, but as it is difficult to do this with certainty, and remembering what importance Lister, and Bergmann more emphatically, attach to getting rid of pabulum (vide Lister's care for drainage), we should add to the above:

Fact 4. Get rid of pabulum, unless you are quite sure of asepsis.

It is useless and not ingenuous for Mr. Tait to assert that Mr. Lister has never paid any regard to the soil, or nidus. He did *not* formerly think removal of soil *sufficient*, as Mr. Tait insists it is, but further experience has led him to believe that this will be sufficient if the germ can be kept out. In other words, if you remove pabulum and keep germs *out*, there need be no killing of germs, no *antisepsis*, only *asepsis*. Why, the quotation from Mr. Lister, which Mr. Tait accepts apparently, says nothing about killing germs, only *keeping them out*. His own experience with blood clot and the more conclusive experience of Schede show that it is not *necessary* even to remove the pabulum. But here Schede employs corrosive sublimate in order to make it more certain that the germs are destroyed. On all sides vital resistance to microbic invasion is admitted. So, Mr. Tait has no advantage.

Really Mr. Tait admits the essential thing when he admits that germs are the active agents. His address certainly is very clear on this point. Some, we suppose, are already admitting that Mr. Tait's arguments are very convincing. Convincing of what? Certainly not of the non-existence of germs as a threat to wounds, because he acknowledges this. He does convince any one that getting rid of pabulum is a good way (in abdominal surgery) to prevent wound infection. But do not Schede's results show that, properly looked after, even *pabulum* may be harmless if the germs are kept out or annihilated? Why not, then, say that in any case the safest course should be pursued and when either alone is unsafe to resort to both? Bergmann's method is practically the same as Tait's, except that Bergmann's fluids and dressings are sterilized by heat and Tait's are not. Tait kills his admitted germs by purging away this pabulum after closure of wound. Vital resistance comes in in any case, phagocytosis or whatever it may be called.

It is with the greatest satisfaction that we close this article with the words of Mr. John Eric Ericson in the *British Medical Journal* for October 4, 1890:

"Does not the difference in opinion and the equality of success in practice of Mr. Tait and the Listerians admit of

easy explanation? Is it not this? Septic infection is the result of traumatic putrefaction. For traumatic putrefaction two elements are necessary: (1) Putrescible material, and (2) a ferment or infective germ. If either be absent no putrefaction can occur and no infection result.

“Mr. Tait removes the putrescible material, coagula and shreds of dead tissue, by flushing and drainage; the ferment having then no pabulum, may be freely admitted with impunity.

“Sir Joseph Lister excludes the ferment by filtration of the air and by germicides, and thus practically sterilizes the putrescible material, if any be left in the wound.

“Thus, in either case, the one element, which is essential to the putrefactive process, is removed, and the other, which is left, is by itself innocuous. But is it wise to be exclusive in the employment of one or other of these methods? Is that which is more applicable to the purposes of the gynecologist necessarily best suited to those of the surgeon? Are the principles which guide the gynecologist in an abdominal section necessarily those that should be adopted by the surgeon in the treatment of a compound fracture of the skull or of excision of an upper jaw? Surely, the wisest course is to endeavor to determine those cases to which either method is most applicable.”

LEPROSY IN LOUISIANA — NECESSITY OF PROVIDING FOR LEPERS.

It has long been known that leprosy existed in Louisiana; the most precise and valuable contribution to this subject is the paper by Dr. H. W. Blanc in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*. The number of cases that applied for relief at Dr. Blanc's hospital clinic was greater than anybody had imagined. These cases, however, were nearly all residents of New Orleans; there were several other cases in the rural districts of the state. Some feeble attempts have been made to interest our law-makers in lepers, but there seems to be no disposition to make room in the budget for the unfortunate victims of an incurable malady. Some of them have been kept as in-patients in the Charity Hospital, but most

of them have visited the out-clinic of the hospital, preferring to live at home.

In olden times a leper was set down as a source of danger to a community, and he was placed in an institution where he could drag out his weary existence without endangering the health of other people. Sometimes this quarantine amounted to banishment and was attended with sad hardships; but it was effectual, and leprosy almost became extinct. In countries where the disease was not regarded as communicable, it was not blotted out. In Norway leprosy is not regarded with special horror or fear, and the disease is allowed to linger there. In Louisiana we seem to be as brave or as foolishly indifferent as the Norwegians. There are no statistics from former years which would enable us to say whether the vile disease is increasing or diminishing; but there can be no doubt that the presence of more than fifty lepers in a state containing 1,140,000 inhabitants is sufficient to justify the expenditure of enough money to make them no longer a source of danger. Not many months ago a single leper was found in London. He was a butcher, and the discovery that a leper had been handling the mainstay of British life and the British constitution—namely, the beefsteak—almost threw the world's metropolis into a panic. The news was telegraphed to all parts of the English-speaking world. Meetings were held under the auspices of the Prince of Wales, whence the patient was dubbed "the Prince of Wales' leper." Some one advocated the founding of a leper hospital, but nothing was done, although, we believe, subscriptions were raised. In time the scare died out.

When the "Prince of Wales' leper" was creating as much excitement as the Irish question, our daily papers kept us duly informed of the movements of the various august personages that interested themselves in the patient. That unfortunate butcher was talked about much more than he deserved to be. Was it merely the fact that the man was leprous that made him such an object of interest? No, it was an item of news, with the Prince of Wales thrown in for lagniappe, for which the Associated Press paid, and which was doled out to our daily papers here because they belonged to the Associated Press.

These thoughts were suggested to the writer by some little incidents that occurred at various times. While attending a play at the most popular theatre in New Orleans, on October 19, 1890, he saw a youth pass by him between the acts who presented the typical leonine expression of tubercular leprosy. The theatre was crowded; it was a Sunday night performance, always the best patronized in our wicked city. The leper was well dressed; he passed in and out among the throng like any one else. The writer has seen this same leper at the Charity Hospital; his photograph is no doubt in the hospital collection.

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About two years ago the writer went, one afternoon, into a well-known restaurant to get a lunch. Just as he was about to begin operations three men entered and sat at a table not more than five yards distant. The husky voice of one of the men attracted the writer's attention. A careful examination showed that the man was suffering from leprosy in an advanced stage; his face had the leonine expression, and the husky voice doubtless indicated that the disease had invaded the larynx. A waiter was called and asked if the man with the hoarse voice was a regular patron of the eating saloon. The reply was in the negative. The writer then ate his lunch.

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About two months ago, while walking along the river front (North Peters street), a block and a half below Elysian Fields street, the writer saw a group of women and girls standing in a doorway and talking. When he was abreast of the group, he was struck by the husky voice and labored speech of an old woman. True to his medical instincts, he turned his gaze upon the sufferer and saw a well marked case of leprosy. He was walking along not very slowly, but he noticed a small stand or show case containing bread and cakes for sale. The old woman was bare-headed, and from appearances seemed to be an inmate of the house in which the cakes were sold.

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Now, is this right? These incidents are not much, but they indicate a horrible degree of neglect on somebody's part. One leper 3000 miles away can furnish our papers with pala-

table news, but fifty lepers at home are allowed to pass unnoticed. Unfortunately, frequent contact with our own lepers has made us callous and indifferent to the risk we are constantly exposed.

But our press should not stop at the mere mention of this danger. It seems to the writer that the daily press has, in this connection, a duty to perform, namely, to agitate the question incessantly and in a manner befitting the gravity of the subject, but carefully avoiding all attempt at sensation, until our legislators shall be brought to a realization of the necessity of providing a suitable asylum for all of our lepers, and thus protect the health of the other members of our body social.

* * *

It is the opinion of a large majority of the men who are familiar with the disease that the best known means of preventing its spread is by segregation under state or government authority. This has been noted time and time again from the pages of this journal, and a member of its staff, already referred to, who has, perhaps, seen more cases of leprosy in America than any other American, has advocated this plan before the medical public as well as before individual members of the state legislature.

Leprosy is not dying out in Louisiana, and our people should realize this: on the contrary, many of the most recent cases are in children of non-leprous parents. It seems to us that he who runs may read.

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

DEPARTMENT OF SURGERY.

In charge of DR. F. W. PARHAM.

INGROWN TOE NAILS.

Auger, in the *Bull. et Mem. de la soc. de chirurg. de Paris* (*Centralblatt für Chirurg.* No. 36), recommends the following procedure for preventing the return of the trouble: The operator pushes a long, narrow knife entirely through

the thickness of the toe, in front of the interphalangeal joint, and carrying it forward close against the edge of the nail, brings it out at the end of the toe, thus cutting out a lateral flap. The incision should go through healthy tissue, but should pass between the artery and the bone, in order to protect against gangrene of the flap. The skin-flap being now turned back, the knife is again inserted at the base of the flap, carried at right angles down to the bone and then being turned is made to cut directly forward close to the bone through the nail and the whole thickness of the soft parts. It is necessary to hug the bone closely, in order to extirpate a corresponding portion of the nail bed and thereby insure a radical cure.

The skin-flap is now laid back on the raw surface and exactly adjusted to the apposed wound surface. After ten to twelve days' rest in bed the patient may go about. Anger has thus operated on 117 cases, and has never observed a recurrence. This resembles the operation of Dr. Cotting, of Boston, in some respects, but differs from it by providing a flap to serve as covering for the raw surface made in the Cotting method and in taking away a portion of the side of the nail, which Dr. Cotting leaves entire, believing it more scientific to take away only the offending soft parts. We believe the operation of Anger a decided improvement, in that it takes away all diseased tissue but does not sacrifice healthy skin, this being saved and laid back over the fresh surface after removal of all that is necessary. The natural pad on the side of the toe is much better than the cicatrix of the Cotting operation, and the healing is more certain, rapid and permanent. The removal of a portion of the nail-edge would seem to us desirable, because, the general breadth of toe being diminished, that of the nail should be correspondingly abridged.

[It has occurred to the writer, but he has not yet had an opportunity to put the suggestion into practice, to modify the Cotting operation in the following manner, where the diseased condition of the soft part of the side of the toe did not permit of the carrying out of Anger's excellent plan. After cutting away the side of the toe as recommended by Cotting, but including a proper portion of the nail, as suggested by Anger, a strip of skin large enough to cover completely the whole raw surface should be applied by Thiersch's method of transplantation. We believe this would be a decided improvement on the Cotting operation, but we would commend the procedure of Anger as better than either when practicable to carry it out.]

IMPURITIES UNDER THE FINGER NAILS.

We are all, doubtless, familiar with the common belief of people in the poisonous properties of the finger nail. We have, indeed, ourselves seen some severe inflammations caused by the scratch of a nail. So general a belief must, according to Herbert Spencer, have something of truth, and modern bacteriology has furnished the demonstration. It is not the nail *per se*, of course, that poisons, but something that is on or under the nail. Seventy-eight examinations were recently made in Vienna (says the *British Medical Journal*) of the subungual spaces, and there were found: of micrococci, 36 kinds; of bacilli, 18 kinds; of sarcinæ, 3 kinds, and common mould spores were very often present.

Personal cleanliness should be insisted on in everybody, but how necessary is it for the surgeon. Antiseptics can never and will never successfully *take the place* of soap and water and the scrubbing brush, but as additions to this process they must, in the light of the demonstrations before us, be henceforth forever included in the routine practice of the conscientious surgeon. The habitually clean will, of course, have less trouble in the preparation of the hands, but the necessity for attention to details in the cleaning of the hands and nails has now been made plain by the valuable experiments of Furbringer, confirmed by many others and the practice of surgeons like Billroth, who now adopts the suggestions of these investigations in his operative work.

THE VALUE OF THE INJECTION TEST IN CASES OF SUSPECTED RUPTURE OF THE BLADDER

The case of Walsham's, taken by the *New York Medical Record* from the *Lancet*, is suggestive. An elderly woman had been knocked down by a wagon, one of the wheels passing over the lower part of the abdomen. There was fracture of pelvis, involving sacro-iliac joint, with considerable separation of symphysis. She was quite unconscious and collapsed at first, but with slight return of consciousness she complained of pain in lower part of abdomen. These symptoms, the history of the accident and the drawing of a small quantity of bloody fluid from the bladder and the apparent abnormal projection of point of catheter when handle was depressed, all seemed to call for exploration by incision above the pubes. Before doing so, however, Dr. Walsham determined to try the injection test. This was carefully done; the same amount, within a drachm or so, was returned. In the face of this test he decided to

wait a few hours. In the course of the evening the woman passed water naturally, continued to do so, and made an uninterrupted recovery.

A SIMPLE SUBSTITUTE FOR BELLOCQUE'S CANULA AND OTHER METHODS OF CONTROLLING EPISTAXIS.

Dr. W. W. Parker, of Richmond, Va., in *New York Medical Record*, gives a very simple and sensible method, which has been very efficient in his hands. He takes fifteen lints or other threads, three and a half or four inches long; these he doubles on themselves and ties in the middle. This "comet in miniature," with nucleus and thirty tails, is now pushed with a probe (or stick) back to the posterior nares. He withdraws then the probe and plugs the anterior nares. The thirty (or more, if one wishes) threads floating in the blood coagulate it. The plug being small is easily pushed in. One end can be left long enough to be caught in order to pull out the plug.

MEDICINE.

TREATMENT OF DIABETES MELLITUS.

From a Clinical Lecture by Prof. Lépine.

It was formerly supposed that an infinitesimal quantity of virus was sufficient to cause, in an animal, a virulent disease. Later researches have shown that this idea is erroneous. There are certain ferments which act like poisons; a sufficient quantity is required to produce certain effects; a too small quantity of glycolytic ferment will not destroy a large amount of glucose. If we desire to obtain a clear view of the pathogeny of diabetes and the indications for its treatment, we must take account both of the amount of sugar to be destroyed and of the means of destroying it which are at the disposal of the patient. In other words, in the treatment of diabetes we must endeavor, (1) to increase the destruction of the sugar, and (2) to diminish its production in the economy or its introduction with the food.

Can we furnish the patient with a glycolytic ferment? It is to be hoped so, though the efforts that I have made for a month are not very encouraging. Pancreatine does not possess an appreciable glycolytic power, and pilocarpine, which

was relied upon to increase, to a certain extent, the pancreatic function, has not thus far succeeded in any case except that of M. Lanois. Although we can not, just now, provide the diabetic patient with a ferment, we may try to increase its power. *In vitro*, carbonic acid diminishes it greatly: oxygen, on the contrary, acts favorably: advantage might be taken of this fact in treatment. Ozone, it is said, has been tried without effect: but that is no reason why further experiments should not be made.

It has long been known that alkalies favor the destruction of sugar. But when we recall the very small amount of bicarbonate of soda contained in a glass of Carlsbad water, of Bourboule, or even of Vichy, and besides the manifest utility of these waters in certain cases, we are forced to the conclusion that they act otherwise than through their bicarbonate of soda. Perhaps by exciting digestive activity they increase the production of the glycolytic ferment.

Without acting upon this ferment, we may increase the destruction of the sugar by muscular exercise. To Bouchardat belongs the credit of having first clearly shown this fact; but in his practice he carried it to excess. Diabetic patients can not over-exercise with impunity. The physician should see to it that his patient does not take too much exercise. In general, massage is of more value than exercise: I have obtained excellent results from its employment.

I now pass to the consideration of the means of diminishing the production of sugar. Opium has long been recognized as one of the most valuable remedies in the treatment of diabetes. Some years ago M. Villemain recommended that belladonna be associated with opium. I have never perceived the utility of this suggestion, for the belladonna dries the patient's throat, and I have never seen a diabetic patient derive any material advantage from its use. Quinine, bromide of potassium, salicylate of sodium, and antipyrine have also rendered great service to a certain number of diabetics, but all of these drugs, except the bromide, have a common vice, upon which I have insisted for the last ten years, and that is, that while they diminish the production of sugar (which I was the first to prove experimentally), they also check its destruction. I may say to-day that this effect is due to the inhibitory action which these substances exert upon the glycolytic ferments.

We may understand, therefore, to what extent these agents are useful. The diminution of the glycosuria which they effect is really advantageous only to those patients in whom there is an over-production of sugar; in them they place an

obstacle to an exaggerated denutrition. In other patients the diminution of the glycosuria, if it take place, is deceptive, since it may really aggravate the morbid condition by impeding the formation of the glucose necessary to maintain life.

To sum up, in diabetes we should increase the destruction of glucose; unfortunately, our abilities in this regard are exceedingly narrow, although we are at present acquainted with the glycolytic ferment. We can much more easily impede the formation of sugar, but the drugs used for this purpose unfortunately restrain its destruction, which is a serious fault. This gives an additional reason for insisting on abstention from amylaceous foods. My views on this subject are too well known for me to repeat them here. I deem it advisable, however, to call attention to the inconveniences of the ingestion of too great a quantity of meat. Prof. Naunyn recently reported several cases of diabetes in which the increase in the meat diet caused a reappearance of the glycosuria which disappeared under a moderate diet.

Another drawback, still more serious, of a too abundant meat diet is the acid diathesis, leading to coma if not promptly combated with alkalies in large doses.—*Semaine Médicale L'Union Médicale du Canada.*

SUNFLOWER IN MALARIA.

Dr. V. Zubovick (*Fratch*, 1890, No. 33), having treated many cases of malaria, quotidian, tertian, and quartan, some of them with marked enlargement of the spleen, anæmia, and gastric and intestinal disorders, and finding among these cases nine which experienced no benefit from quinine, he decided to try tincture of sunflower (*helianthus annuus*). He himself prepared two kinds of tincture, one of the flowers and another of the bark of tender branches; he filled bottles with these materials and macerated them in alcohol of 96 per cent.; the tincture of the flowers was yellow, and that of the young bark was greenish. Of these tinctures he gave a wineglassful in water, three times a day. After two days of treatment the paroxysms became feeble, and the patient felt much better; at the end of three or four days, the attacks usually disappeared completely, leaving only a weakness which was quickly relieved. No disagreeable secondary effects were observed, unless a copious night-sweat noticed in three patients might be considered as such. The treatment was continued two or three days after the paroxysms ceased. There was no relapse.

The tincture of the flowers seemed to be more efficacious than that of the young bark. No difference in resistance to the drugs was noted in the various types of malarial fever. According to the editor of *Vratch*, many physicians in Kazan have found sunflower very useful in malarial fevers.—*Revista de Ciencias Medicas de Barcelona*.

DISORDERS OF SLEEP: INSOMNIA.

By DR. CHAS. FOLSOM, in *Boston Medical and Surgical Journal*.

Paraldehyde is especially valuable in conditions of mental excitement, where the duration of sleep may be prolonged by adding morphia. The physiological action is first on the cord, and then on the medulla. Toxic doses (ten grammes or more) produce a sinking of blood pressure and slowing of the heart beat; doses of six to eight grammes having been observed to give rise to nausea, headache, confusion, vertigo, and weak pulse. In five cases Berger found material reduction in the quantity of urine. In safe doses it is not anæsthetic or analgesic. To get a definite hypnotic effect, the dose must be increased. Its acrid taste, and the disagreeable persistent odor from the breath are objections to its use, and even when largely diluted it is often objected to, on the ground of its being a gastro-intestinal irritant.

The temptation to its habitual use is less than in alcohol, morphia, cocaine, and chloral; the symptoms produced being tremor, confusion, impaired memory, diminished intelligence, etc.

Dose, two or four grammes, which, if necessary, may be gradually increased to eight, and repeated once or twice in the night.

Amyl-hydrate, a tertiary amylic alcohol, an oily, colorless liquid, appears to stand in hypnotic power below chloralhydrate, and above or below paraldehyde, according to different observers, but with even less depressing action on the heart than the latter. It may be used in about the same dose as paraldehyde, being not so soluble (1 to 19 water, freely in alcohol), and with a much less disagreeable taste and odor. Its physiological action is directly on the cerebrum, and later on the medulla. The toxic effects from it, of headache, nausea, weak pulse, are less marked than in paraldehyde, and it is less a gastro-intestinal irritant, although sufficiently so as often to require its administration by the rectum.

Chloralamide, or more properly chloral-formamide, produced by adding anhydrous-chloral to formamide, is decomposed again in aqueous solution (1 to 19) if above a temperature of 60 deg. C., or in crystals if above 115 deg. C. It is also decomposed by alkalies and alkaline carbonates. It is, therefore, well to give it in slightly acid solution, with spirit, or as an elixir, thereby sufficiently disguising its bitter taste. It is claimed that it possesses all the advantages of chloralhydrate, and on account of the stimulating properties of the formamide, without its depressing action on the heart, a fact verified by the sphygmograph, the comparative dose being as 3 to 2. The danger from the larger dose, over 30 or 40 grains, is less than in chloral. Disagreeable after-effects are much less common. Some observers value chloralamide most highly, while others regard it as in no way deserving special praise. In my experience, with only the small dose, it has done well. If it shall be proved after full trial to be safer than chloral, and more certain than the other pure hypnotics, as it is claimed to be, its cheapness is in its favor for general use.

Hypnone (acetophenone, phenylmethyl acetone), one of the aromatic series of acetones, although praised by Dujardin-Beaumetz, has proved in the hands of most investigators of little value as a hypnotic, of unpleasant taste, and depressing to the respiratory and cardiac centers.

Ural (chloral-urethan) is less potent than chloral, and more so than urethan. It is very bitter, soluble in alcohol, and but little so in water. In doses of more than two grammes there may be transient headache and fatigue.

Somnal (ethyl-chloral-urethan) contains four atoms of hydrogen and two of carbon more than chloral-urethan (ural). It appears, to have no especial advantage over chloralamide, except that it is more soluble. It has somewhat greater hypnotic power than ural. Its composition is not regarded as certain or its action sure.

Acetal (diethylacetal) is an acrid hypnotic without advantages to compensate for its being a gastro-intestinal irritant.

Acetl, ural, hypnone and somnal do not seem to me to have sufficient therapeutic value to justify their existence. Hyoscine and hyoscyamine have a limited range. Of the other hypnotics we must trust somewhat to experience in ascertaining which is least likely to disagree with a given patient; and to one already discouraged by long illness an unsuccessful trial of a new remedy may be so unsuccessful as to be disastrous. Personally I used them sparingly, and as indicated. There

are cases where very large doses of powerful hypnotics must be used to produce sleep or else alcohol freely. On the other hand, most patients sleep better than they think and many sleep enough who believe that they sleep scarcely at all.—*Notes on New Remedies, L. & F.*

TREATMENT OF TAPEWORM.

[From a lecture by Potain.]

No remedy should be given for tapeworm unless the diagnosis is certain.

Some tænicides are *traumatizing* (filings of iron, tin, zinc, charcoal); some act *chemically* (coal oil, nux vomica, cyanide of potassium); others stupefy (carbonic anhydride, ether, alcohol); the true tænicides are *specifics*, and even these are of moderate value. Indigenous remedies should be preferred to exotics, because they all lose their powers after a certain time.

The principal exotic remedies are: *muccenna* (a species of acacia), the bark of which is very useful in Africa, but not so much so in Europe; *kamala*, which is only occasionally efficacious; and *kousso*, much used in Abyssinia to expel part of the worm, but is very nauseous, scarcely tolerated, and effects only 10 per cent. of cures, notwithstanding the great fame which it enjoyed in Europe. Kamala and kousso both become inert at the end of a year and a half or two years.

Among the indigenous remedies there are *male fern* (ethereal extract), which is usually very difficult to administer, and is not certain in its action (hence the addition of calomel, etc.); the *common pumpkin*, (the best of all remedies), the active part of which appears to be the perisperm, which contains a greenish resin, but is often repugnant and occasionally ineffectual; *pomegranate* (bark of the root), only active when fresh, and the best preparation of which is the extract. The active principle of the last is a liquid, *pelletierine* (the sulphate is solid); in combination with tannic acid, which renders it less soluble, is very costly; but it is a good tænicide, and effects a cure in about 80 per cent. of the cases, although it is sometimes as dangerous to the patient as to the tapeworm: three decigrams (equal to four and one-half grains) seem to be a proper dose.

Potain prefers pumpkin seeds above all other tænicides, since they are effective, harmless, do not need to be followed by a purgative, do not demand that the worm shall have a large number of links, and can kill the parasite by a slow intoxication, large doses being unnecessary, the patient merely taking for several days a few handfuls of peeled seeds one by one.—*Gaceta Medica Catalana.*

A CASE OF DIABETES INSIPIDUS WITH PARTIAL DESTRUCTION OF THE LENTICULAR NUCLEUS AND THE INTERNAL CAPSULE.

DR. J. G. EDGREN, OF STOCKHOLM, in the *Nordiskt Medicinskt Arkiv*.

A young agricultural laborer, who died at the age of 25, suffered in his early years from suppurative troubles involving the legs, arms, and neck, most probably of a scrofulous character; he afterward enjoyed a relatively good state of health up to his nineteenth year (1884). He then commenced to suffer from dyspeptic symptoms, such as nausea, vomiting, pyrosis, and obstinate constipation. One week later, he had violent headache, with a feeling of pressure all over his head, vertigo, intense thirst, and considerable excretion of urine. On his admission to the Seraphine hospital, Stockholm, February 8, 1884, he had facial paresis on the right side, corresponding to the two inferior branches of the facial nerve; the upper branch was not involved. When the tongue was protruded, it went toward the right side. There was no other motor or sensory disturbance. The movements of the eyes and the pupils were normal; the fundus oculi was normal on both sides. There was nothing unusual about the internal organs. The urine was feebly acid, with a specific gravity of 1002 or 1005, contained no sugar or albumen, and amounted to three or four quarts in twenty-four hours.

The patient denied having ever had syphilis, and there were no manifest symptoms pointing to such a condition. There were no nervous diseases in his family, but his father died of pulmonary tuberculosis, and a sister had a weak chest. The patient improved considerably under the hospital treatment of iodide of potassium; the attacks of vertigo disappeared, the vomiting ceased, the headache became less intense, and the facial paresis improved. The thirst and the urine remained unchanged. He left the hospital on May 29, 1884; but the cerebral symptoms returned, and he went back to the hospital again on April 1, 1885, in about the same condition as at first; the quantity of urine, however, amounted to five or six quarts in twenty-four hours, but was still free from sugar and albumen. Iodide of potassium again caused the nervous symptoms to disappear, with the exception of the facial paresis, which was not relieved when the patient left the hospital on May 30, 1885.

The thirst and excessive urination always remained unchanged. In the following year the patient probably had an acute pneumonia, from which he did not fully recover. In 1887, toward the close of the year, he had a cough, accompanied with hæmoptysis; this recurred twice in 1888. He entered the hospital for the third time on September 5, 1888: examination revealed

advanced bilateral pulmonary tuberculosis. All the nervous symptoms had completely disappeared. The quantity of urine voided varied from six to eleven quarts in twenty-four hours, with a specific gravity of 1002 or 1005, but continuing free from albumen or sugar. During the patient's stay in the hospital (up to April 13, 1889), Dr. Edgren, with a view to diminishing the intense thirst and lessening the enormous excretion of urine, tried several remedies, such as antifebrine, antipyrine, salol, opium, salicylate of sodium, and galvanization of the sympathetic nerve, but no effect was obtained with any of these agents except antipyrine. In doses of three or five grains in twenty-four hours, antipyrine caused a very considerable reduction in the amount of urine excreted, and relieved the feeling of thirst, but as soon as the drug was suspended, the symptoms returned with all their intensity. The other medicines were entirely without effect. The patient left the hospital on April 13, 1889, in almost as bad a condition as when he entered, but his condition became rapidly worse at his home, and at the end of five days he entered the hospital for the fourth time. He then presented all the symptoms above mentioned, and he had, in addition, œdema of the legs, albuminuria, and violent periodical attacks of diarrhœa. He rapidly grew worse, and died on August 18, 1889.

At the autopsy, held on the following day, it was discovered that the inferior portion of the lenticular nucleus and the anterior portion of the internal capsule were destroyed, but beyond this there was no other change in the central nervous system. There were also cavities in the lungs, syphilitic hepatitis and perihepatitis, and finally amyloid degeneration of the spleen, kidneys and intestines.

The changes in the brain revealed by the autopsy fully accounted for all the nervous symptoms presented by the patient.

DEPARTMENT OF LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

In charge of DR. AUGUSTUS McSHANE.

A NEW METHOD OF RAISING THE EPIGLOTTIS.

In cases of pendulous epiglottitis, Dr. S. O. Preston raises it in the following manner: He uses a laryngeal sound with the normal curve, but bends the lower end of it laterally for about half an inch. He introduces it along the base of the tongue in such a manner as to depress the middle glosso-epiglottic fold: the epiglottis is brought into a position that

renders it possible to see not only the whole length of the vocal cords, but also the posterior surface of the epiglottis.

The instrument causes no irritation, and is very well borne for sufficient time to permit an operation.—*Allgem. Wiener mediz. Zeitung. Revue de Laryngologie, d'Otologie, et de Rhinologie.*

RESORCIN IN THE TREATMENT OF LARYNGEAL ULCERS.

In a communication to the French Society of Otology and Laryngology, May 23, 1890, Dr. de Tymowski, of Schinznach-les-Bains, says: I do not intend to touch upon the question whether ulcerations of the larynx in phthisical patients are always tuberculous, but I have found that these ulcers can very often be healed temporarily; and since it has become common to employ surgical means in treating the larynges of consumptives, I have daily employed local measures, with the following results:

1. By rest amid hygienic surroundings, and by an appropriate and almost exclusively liquid diet, not only can superficial erosions be cured, but also true ulcers situated upon the posterior wall of the larynx, the epiglottis, or the superior and inferior vocal cords.

2. When these parts are infiltrated and commence to ulcerate, an external derivative treatment is indicated from the beginning; the throat should be swabbed with a weak solution of cocaine (2 per cent.), inhalation with alkaline water should be prescribed, a liquid diet should be insisted on, and speaking positively forbidden. As soon as the inflammatory symptoms subside, the best result is obtained by swabbing with lactic acid (50 or 80 per cent.), or with a solution of *resorcin* (80 per cent.).

3. The iodoform treatment produces an excellent effect when the remedy can be applied twice a day, and only when the ulcerations have a granular aspect; otherwise this treatment will only serve to increase the infiltration and œdema; dysphagia will become aggravated in consequence, and the patient's condition will become insupportable. Again, the ethereal emulsion of iodoform is very painful, and not less easy to apply than an insufflation of powdered iodoform with a good instrument (like that of Dr. Kurz, of Florence).

4. The application of resorcin (80 per cent. solution) is the surest method, and the one most agreeable to the patient, for it does not cause pain. Immediately after the application of the resorcin, the infiltrated parts are covered with a whitish

coating which lasts for several hours; then the œdema and the suppuration diminish unfailingly after the daily use of the medicaments.

5. But if the ulcers are dirty, ugly, and crateriform, signs which ordinarily indicate a tubercular character, a still stronger saturated solution of resorcin should be employed. This produces just as good an effect as can be obtained from the use of lactic acid; it is even to be preferred to the latter, since a preliminary application is not necessary, as it is for the application of a strong solution of lactic acid.

The use of resorcin in solution as well as by inhalation (2 to 5 per cent.) is to be highly recommended in all cases in which lactic acid, and especially curetting by Hering's method, can not be applied.

The therapeutic effect of resorcin is as an antipyretic, antiseptic, and hæmostatic. Andeer gives it as an antipyretic in doses aggregating forty-five or seventy-five grains a day. Dujardin-Beaumeiz, Solimomy, and Haab have often employed it, both internally and externally; and recently, Dr. Leblond reported upon the use of resorcin fumigations and insufflation in diphtheria. It checks the extension of the diphtheritic patches promptly, causes the ganglionic enlargement to disappear and combats with efficacy the general intoxication. In whooping cough, in incipient tuberculosis, and in chancroids, resorcin is of great and undoubted value. (*Semaine médicale.*)

It is chiefly in the treatment of diseases of the skin that resorcin has been largely employed by Dr. Unna; and after I saw, in the dermatological clinic of Dr. Bertarelli, of Milan, many cases of lupus cured with resorcin, I commenced to use it in all wounds of a septic appearance, or when they show no tendency to heal, as in lymphatic or tubercular subjects, etc.

Since 1884 I have used it in the treatment of laryngeal ulcers. It is true that there is always danger of a relapse as long as there is infiltration of the larynx or tuberculosis of the lungs; this relapse, unfortunately, is almost impossible to overcome, in spite of treatment; still it is a great advantage to be able to lessen the frightful sufferings of the patient, remove the dysphagia, allow the patient to eat, and, during this time, to gain strength and even, if possible, to be cured. The physician who has treated phthisical patients knows what a great moral effect even a brief improvement has upon the unfortunate sufferers.—*Revue de Laryngologie, d' Otologie, et de Rhinologie.*

NASAL INTUBATION.

Among the many interesting and valuable papers published in the *Transactions of the Medical Society of the State of New York* (1890), there is one by Dr. D. H. Goodwillie, of New

York, on *nasal intubation*. O'Dwyer's laryngeal intubation tubes have rendered operative interference (tracheotomy) unnecessary in many cases of diphtheria; Dr. Goodwillie's nasal intubation tubes may perhaps do the same service in regard to diseases of the nasal cavities.

Nasal intubation the author defines as consisting in placing in the nostrils a tube of suitable material, size, and shape, through which the respiration is performed, and also as a means of treatment for nasal diseases from various causes. After many years' experience, Dr. Goodwillie finally settled on pure soft rubber as the best material for the intra-nasal tubes. The tube gives little or no inconvenience to the patient, is not seen externally, and can be readily introduced and removed. Respiration can be performed during treatment.

Nasal intubation has both a general and a local effect. Its local effect is to correct abnormal nasal conditions, thus in a general way increasing pulmonary action, as there can not be normal pulmonary respiration without normal nasal respiration.

The following are some of the nasal diseases in which the intra-nasal tubes have successfully been used:

1. Hypertrophies of the soft intra-nasal tissues, when the tube is used for a sufficient length of time to produce change in the vascular tissue.

2. Deviations of the cartilaginous septum.

3. Intra-nasal hemorrhage.

4. Fractures of the nose.

After the removal of hypertrophic tissue, deviations of the septum, polypi, etc., by surgical means.

In order to obtain a successful result in treatment, personal attention should be given daily to all cases, and twice daily for all surgical cases, during the first part of the treatment. After the first few days' treatment the patient may, between visits, remove the tube for cleansing and return it as often as necessity requires. For cleansing the nostrils during treatment, the best thing is peroxide of hydrogen, full strength, applied in the form of a spray with a rubber atomizer, or with cotton wound on a probe and passed into the inferior meatus of the nostril. Any good antiseptic will answer, but the peroxide of hydrogen has the advantage over all others of being a thorough cleanser and a good antiseptic. After cleansing the nostrils and tube, put a little boro-vaseline (white vaseline 3j, boracic acid 3j, menthol 1 per cent.) on the tube, or warm and spray the nostrils with it before placing the tube in the nostril. If there be much irritation, substitute a 1 per cent. solution of cocaine for the menthol. The patient may use between visits, after cleans-

ing, the boro-vaseline in tin tubes for convenience, or a powder of boracic acid and menthol by means of an insufflator.

To place the tube in the nostril, raise the end of the nose and pass the tube into the lower passage until the anterior end is in the vestibule, out of sight. The rubber tube increases in size by use and may require to be shortened by cutting off the posterior end.

TREATMENT OF ACUTE OTITIS MEDIA BASED UPON THE RESULTS OF BACTERIOLOGICAL EXPERIMENTS.

E. ZAUFAL, in the *Prager Med. Wochenschrift*.

The author refers to his own labors and those of Netter, published in the *Annales des Maladies de l'Oreille, du Larynx, du Nez, et du Pharynx*. No. 10, 1888, according to which acute otitis media may be caused by different parasitic microorganisms. The streptococcus pyogenes and the diplococcus pneumoniae are found most frequently; then come the staphylococcus pyogenes albus and aureus. The bacillus pneumoniae of Friedländer and the staphylococcus pyogenes tenuis and cereus albus are rarely found.

Usually a distinction is made between primary and secondary otitis, although primary otitis really does not exist, for the pathological microbes are always introduced into the cavity of the tympanum, either through the eustachian tube or by way of the blood. Clinically, however, the distinction holds good.

Among the primary otites we should range the acute affections of the middle ear which occur during the course of a rhinitis, pharyngitis, tonsillitis, bronchitis, and pneumonia. We should include also otitis observed in children affected with adenoid vegetations, although these are not the direct cause as often as is believed. They act only as the predisposing cause by retaining the mucus which favors the development of microorganisms.

Otites resulting from operations upon naso-pharynx, nasal injections, plugging of the posterior nares, etc., may be classed among primitive otites.

To secondary otites belong cases in which the inflammation of the tympanum is not directly due to microorganisms of a general infectious disease. The general infection only prepares in the tympanum a soil favorable to the development of the microorganisms. Such are the cases of otitis which arise in the course of typhoid fever, scarlatina, measles, variola, recurrent and intermittent fever, cholera, diabetes, diphtheria and Bright's disease. To these must be added cases of hamatogenous infection, pyæmia and endocarditis.

The treatment of these cases of otitis should first be directed to relieving the subjective symptoms, especially pain. Zaufal orders cataplasms of acetate of aluminum (Burow's solution), and warm instillations of the same liquid or of a solution of bichloride of mercury (1 to 1000).

As a local anæsthetic he used a 5 or 10 per cent. solution of cocaine, which often relieves pain in the ears as if by magic, but has not effect upon mastoid pain or headaches. For the cocaine to act, it is necessary that the epidermis of the external meatus be previously macerated. If the otalgia still persist, paracentesis is indicated. In regard to fever, he deprecates the employment of the antipyretics in common use, because the rise or fall of temperature is the surest gauge for the indication of paracentesis.

Zaufal endeavors to prevent the introduction of other microorganisms into the tympanum either through the eustachian tube or the external auditory meatus. A secondary infection by way of the tube certainly can not be prevented. Insufflations of air should be avoided as much as possible. Zaufal does not use them until the acute inflammatory symptoms have disappeared, and only when he sees that hearing does not return spontaneously. Infection by way of the meatus can be prevented; the surest way is to obtain a cure with an intact drum-membrane.

But in cases in which a spontaneous perforation or paracentesis is unavoidable, the danger of a secondary infection may be obviated by means of a rigorous antiseptics of the external meatus. This is to be done with a solution of bichloride of mercury after cleaning away all the fatty matter, for the bichloride will not act until this has been removed. An antiseptic dressing is finally placed on the ear.

In order to shorten the duration of the disease and to eliminate the parasitic microorganisms rapidly Zaufal warmly recommends hot poultices of acetate of aluminum, and massage.

A pledget of absorbent cotton is dipped into the following (hot) solution: one gram of alum, five grams of acetate of lead, 100 grams of water; it is then introduced into the meatus. A larger tampon is placed behind the auricle and upon the temple. The whole is covered with oiled silk to prevent evaporation of the water, and kept in place with a bandage. The dressing is renewed every twenty-four or forty-eight hours.

Massage hastens the absorption of the exudations in the ear. It is not enough to knead the mastoid process; the massage should be extended along the side of the neck as low down as the clavicle. Zaufal has had the luck to have a patient in whom the treatment with acetate of aluminum and

massage could be compared with the old treatment, which consisted in performing paracentesis and blowing in air. He found that the duration of the disease with the new treatment was five weeks shorter than with the old treatment, and perforation of the drum was prevented.—*Annales des Maladies de l'Oreilles, du Larynx, du Nez, et du Pharynx.*

PUBLICATIONS RECEIVED.

Da Costa's Medical Diagnosis. Seventh edition.

A case of brain tumor (angioma cavernosum), causing spastic paralysis and attacks of tonic spasms. Operation. By L. Bremer, M. D., and N. B. Carson, M. D. Reprint.

Transactions of the American Surgical Association. Vol. VIII, 1890.

Medical Communications of the Massachusetts Medical Society. Vol. XV, No. 1, 1890.

Transactions of the Medical Society of the State of Pennsylvania, at its Fortieth Annual Session, held at Pittsburg, 1889-90.

On the treatment of eczema in elderly people. By L. Duncan Bulkley, A. M., M. D.

Essentials of Practice of Medicine. Arranged in the form of questions and answers. By Henry Morris, M. D.—Saunders' Question Compends, Nos. 8 and 9.

Essentials of the Diseases of Children. By Wm. M. Powell, M. D.—Saunders' Question Compends, No. 15.

Transactions of the Texas State Medical Association, Twenty-second Annual Session, held at Fort Worth, Texas, April 22, 23, 24 and 25, 1890.

Saunders' Pocket Medical Lexicon. By John M. Keating, M. D.

MEDICAL ITEMS.

USEFUL FORMULÆ.

[From the Weekly Medical Review.]

INJECTION FOR LEUCORRHŒA.—A. A. Heuskens :

℞ Potass. chlorat.....	fl℥iss.
Tinct. opii.....	fl℥iss.
Aquæ picis.....	fl℥xv.

Two or three teaspoonfuls to a quart of water, used night and morning.—*Med. Bul.*

OZÆNA.—Lichtwitz gives the following :

℞ Creolin..... 3 to 5 drops.
 Distilled water..... 1 pint.
 For douching the nose.

CHRONIC GONORRHOEA.—Dr. Briema recommends the use of the following in chronic gonorrhœa as an injection:

℞ Creosote..... ℥x.
 Ext. fl. hamamelis.....
 Ext. fl. hydrast. canadensis..... aa℥xv.
 Aquæ rosæ..... 3xxxij.

M. Sig. : Dilute with warm water before using.—*Buffalo Medical and Surgical Reporter.*

FOR TYMPANITES.—The following formula for tympanites is quoted in the *Deut. Med. Woch.* :

℞ Naphthol,
 Magnesium carbonate,
 Pulverized charcoal..... aa grs. 75.
 Oil of peppermint..... drops, 10.—M.

Divide into fifteen powders, of which one is to be given when required.—*Medical News.*

CATARRH OF PHARYNX.—The following is claimed to be a useful gargle in catarrh of the pharynx:

℞ Sulph. zinci grs. xv.
 Thymoli gr. ½.
 Alcoholis
 Glycerini..... aa f3jss.
 Aq. menth. pip..... f3x.—M.

—*Medical and Surgical Reporter.*

ARISTOL.—These formulæ for using aristol, the suggested substitute for iodoform, are taken from the *London Chemist and Druggist.*

℞ Aristol part, 1.
 Flexible collodion..... parts, 9.

To be used for painting on the skin. Should be dispensed in a dark colored bottle.

℞ Aristol parts, 10.
 Olive oil " 20.
 Lanolin " 100.

Dissolve the aristol in olive oil and mix with the lanolin.

Bougies are made with cocoa butter, each containing from two to eight grains of aristol. Pessaries contain six to fifteen grains and are made with the same basis.

A CURE FOR DANDRUFF.—Dr. A. J. Harrison, of Bristol, recommends the following salve for dandruff:

Caustic potash.....	grs. 8
Phenic acid	grs. 24
Lanolin.....	
Cocoanut oil.....	aa ʒ jv.—M.

This preparation should be rubbed into the scalp morning and evening. Complete cure is usually effected in one to three months.—*Le Progress Med.*

MIGRAINE. — Dr. Hammerschlag publishes, in the *Allgemeine medicinische Centralzeitung*, the following prescription, which he has found valuable in migraine:

℞ Caffein citrat.....	grs. jss.
Phenacetin	“ iij.
Sacchar. lacti.....	“ v.—M.
Ft. Pulv.	

Such a powder may be taken every two hours until the patient is relieved.—*Medical News.*

TREATMENT OF SYPHILIS BY RECTAL INJECTIONS OF IODIDES.—According to the *Revue Generale de Clinique et de Therapeutique*, the following formula may be used by the anus, whenever the stomach is disordered:

℞ Iodide of potassium	grs. xv.
Extract of belladonna	gr. ¼.
Water	ʒiv.—M.

The solution must be warm, and it is said to be well borne and effective.—*Med. News.*

PROPHYLACTIC HAIR WASH.—The following hair wash is said to keep the scalp cool and the hair dry and free from oil; also to prevent dandruff, besides being a most agreeable toilet preparation:

℞ Spirit. etheris.....	ʒjss.
Tinct. benzoin	ʒjss-ʒij.
Vanilin	Mj.
Heliotropin	Mij.
Ol. geranii.....	gtt. j.

M. Sig.: For hair wash. Keep well corked, and do not expose to flame, as the mixture is highly inflammable.—*Dixie Doctor.*

IPECACUANHA IN INSECT BITES.—Dr. Neal recommends the use of ipecacuanha in all cases of insect bites, and states

that recently a patient traversed India, bidding defiance to mosquito bites with the following application:

℞ Pulv. ipecac..... ʒss.
 Spt. vini rect.....
 Ether sulph..... aa ʒss.—M.

This is well worth knowing outside of India.—*Dixie Doctor.*

CONSTIPATION IN WOMEN.—Dr. Lutaud recommends the following in obstinate constipation occurring in women:

℞ Citrate of iron and ammonium..... grs. 3i.
 Fl. ex. of cascara sagrada..... ℥32.
 Saccharin grs. 8.
 Water..... ʒijss.

M.—A half teaspoonful three times daily before meals.—*Medical News.*

OFFICIAL LIST OF THE CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FROM SEPTEMBER 8, 1890, TO OCTOBER 4, 1890.

HUTTON, W. H. H., Surgeon.—Detailed as Chairman Board of Examiners. October 2, 1890.

LONG, W. H., Surgeon.—Detailed as member Board of Examiners. October 2, 1890.

PURVIANCE, GEO., Surgeon.—Granted leave of absence for thirty days. September 10, 1890.

GODFREY, JOHN, Surgeon.—Detailed as Recorder Board of Examiners. October 2, 1890.

WHEELER, W. A., P. A. Surgeon.—To proceed to New Orleans, La., for temporary duty. October 3, 1890.

BANKS, C. E., P. A. Surgeon.—Granted leave of absence for twenty days. October 3, 1890.

AMES, R. P. M., P. A. Surgeon.—To proceed to New Orleans, La., for duty. September 13, 1890.

PETTUS, W. J., P. A. Surgeon.—To proceed to Vineyard Haven, Mass., for temporary duty. October 1, 1890.

HUSSEY, S. H., Ass't Surgeon.—To proceed to New Orleans, La., for temporary duty. September 19, 1890.

—To proceed to Norfolk, Va., for temporary duty. October 3, 1890.

WERTENBAKER, C. P., Ass't Surgeon.—Granted leave of absence for twenty days. September 12, 1890.

PERRY, J. C., Ass't Surgeon.—Upon expiration of leave to rejoin station at Mobile, Ala. September 29, 1890.

YOUNG, G. B., Ass't Surgeon.—To proceed to Memphis, Tenn., for temporary duty. September 13, 1890. To rejoin station at St. Louis, Mo., when relieved at Memphis, Tenn. October 3, 1890.

MORTUARY REPORT OF NEW ORLEANS.

FOR SEPTEMBER, 1890.

CAUSE.	White.....	Colored..	Male.....	Female...	Adults...	Children.	Total.....
Fever, Yellow							
“ Malarial (unclassified)....	11	4	7	8	11	4	15
“ Intermittent	1			1	1		1
“ Remittent	1	1	1	1	1	1	1
“ Congestive	11	1	9	3	6	6	12
“ Typho-Malarial....	6	4	7	3	6	4	10
“ Typhoid or Enteric.....	1	1	1	1	1	1	2
“ Puerperal	1	1		2	2		2
Scarlatina	1			1		1	1
Small-pox							
Measles							
Diphtheria	6	1	1	6	1	6	7
Whooping Cough	4	1	1	4		5	5
Meningitis	5	2	3	4	2	5	7
Pneumonia.....	9	10	10	9	10	9	19
Bronchitis	8	4	3	9	9	3	12
Consumption	38	28	31	35	64	2	66
Cancer	5	6	4	7	11		11
Congestion of Brain.....	9	1	3	7	6	4	10
Bright's Disease (Nephritis) ...	11	5	12	4	16		16
Diarrhœa (Enteritis)	11	8	12	7	11	8	19
Cholera Infantum	5	3	6	2		8	8
Dysentery.....	2	2	2	2	4		4
Debility, General	3	2	3	2	5		5
“ Senile	8	8	8	8	16		16
“ Infantile	2	3	3	2		5	5
All other causes	170	68	131	107	146	92	238
TOTAL	329	164	258	235	329	164	493

Still-born Children—White, 30; colored, 13; total, 43.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 21.40; colored, 25.44; total, 23.49.

DIPHTHERIA RECORD FOR SEPTEMBER, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	5		5	1	2		2
2	3	1	4	2	2	1	3
3				3			
4	1	1	2	4	1		1
5	2		2	5			
6	1		1	6	1		1
7				7			
	12	2	14		6	1	7

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—SEPTEMBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths ..	SUMMARY.
	Mean	Max.	Min.		
1	78	87	69	O	Mean barometer, 30.026.
2	74	81	67	.79	Highest barometer, 30.1c8, 9th.
3	76	83	68	O	Lowest barometer, 29.892, 23d.
4	78	84	73	.04	Mean temperature, 77.6.
5	81	88	74	.04	Highest temperature, 89, 19th; lowest, 56, 30th.
6	79	86	72	.04	Greatest daily range of temperature, 18.
7	80	86	75	O	Least daily range of temperature, 6.}
8	82	88	75	T	MEAN TEMPERATURE FOR THIS MONTH IN—
9	82	88	75	O	1871.....75.8 | 1876.....78.8 | 1881.....80.1 | 1886.....77.8
10	80	86	73	1.06	1872.....79.3 | 1877.....78.3 | 1882.....77.6 | 1887.....77.3
11	80	88	72	O	1873.....78.5 | 1878.....78.6 | 1883.....79.4 | 1888.....75.2
12	81	88	74	T	1874.....78.7 | 1879.....78.7 | 1884.....80.0 | 1889.....78.6
13	78	83	72	.02	1875.....76.4 | 1880.....76.5 | 1885.....77.1 | 1890.....—
14	77	84	70	O	Total deficiency in temp'ture during month, 20.
15	78	86	70	O	Total excess in temp'ture since Jan 1, 370.
16	80	88	73	O	Prevailing direction of wind, N.
17	81	88	74	O	Total movement of wind, 4840 miles.
18	80	87	74	.03	Extreme velocity of wind, direction, and date,
19	82	89	74	O	30 miles, N., 28th
20	80	87	74	T	Total precipitation, 2.85 inches.
21	78	86	71	.30	Number of days on which .01 inch or more of
22	81	88	74	.20	precipitation fell, 12.
23	80	87	73	.02	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
24	80	88	72	.04	FOR THIS MONTH IN—
25	78	84	71	O	1871..... 6.59 | 1876..... 0.26 | 1881..... 4.47 | 1886..... 4.09
26	78	84	71	O	1872..... 2.10 | 1877..... 3.21 | 1882..... 1.59 | 1887..... 6.51
27	77	84	70	O	1873..... 3.21 | 1878..... 2.64 | 1883..... 0.25 | 1888..... 4.15
28	67	70	64	O	1874..... 4.21 | 1879..... 3.15 | 1884..... 3.12 | 1889..... 6.40
29	60	63	57	T	1875..... 7.89 | 1880..... 7.48 | 1885..... 3.55 | 1890..... —
30	62	67	56	.27	Total deficiency in precip'n during month, 2.01.
					Total deficiency in precip'n since Jan. 1, 16.22.
					Number of clear days, 8; partly cloudy days,
					14; cloudy days, 8.
					Date of Frosts, none.
					Mean maximum temperature, 84.2.
					Mean minimum temperature, 70.9.
					Dates of thunder storms, 2.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, *Sergeant, Signal Corps Observer*

PUBLISHERS'



DEPARTMENT.

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The New Orleans Medical and Surgical Journal.

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NEW SERIES:
Whole No. 311.

NOVEMBER, 1890.

VOL. XVIII.
No. 5.

NEW ADVERTISEMENTS IN THIS ISSUE.

	PAGE.		PAGE.
Fairchild Bros. & Foster.....	Cover 2	Pomeroy Truss Co.....	20
Arlington Chemical Co.....	12	Lehn & Fink—Chloralamid.....	22
Herrick Uterine Supporter	18	N. Y. Post-Graduate Medical College	27

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Baltimore Medical College.....	16	Planten's Capsules	1
Battle & Co	11	Robinson-Pettet Co	1
Bellevue Hospital Medical College.....	18	Sanitarium—Von Gohren's.....	1
Boehringer & Soehne.....	10	Sanitarium—Sunny Side.....	1
Bowden Lithia Springs Co	23	"Sanitas" Antiseptics, etc.....	1
Celerina	19	Schiffelin & Co., W. H.....	3
Cerebro-Spinant— I. O. Woodruff & Co.....	21	Sharp & Dohme.....	14
Claudel, Optician.....	16	Svapnia	1
Cook, Gus.....	18	Tarrant & Co.....	15
Diobivurnia	25	Tasteless Quinine	13
Health Restorative Co.....	4	The Wm S. Merrell Chemical Co.....	9
Kentucky School of Medicine.....	16	Victor Safe and Lock Co.....	24
Lilly & Co., Eli	8	Wagner Medical Manufacturing Co	7
Marchand's Peroxide of Hydrogen.....	28	Wheeler's Tissue Phosphates.....	13
Mariani & Co	5		
Martin's Vaccine Virus	18		
McDermott, A.....	13		
Medical Dep't of the Tulane University.....	18		
Moore-McGregor Medication.....	16		
New York Medical Journal	17		
N. Y. Pharmaceutical Co	6		
Osborne, Robert J	13		

COVER.

Buffalo Lithia Water.....	3
Fellows, James I.....	4
Sharp & Dohme—Chemists.....	2

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

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OUR DECEMBER ISSUE

Will contain a paper by DR. J. J. GAUTHREUX, of New Orleans, on "SUPERFETATION," with the history of a remarkable case. This number will also contain a continuation of a well prepared summary of the scientific work of the TENTH INTERNATIONAL MEDICAL CONGRESS, by our own correspondent.

We will also endeavor to give our readers a report from each of the medical societies of Louisiana.

BUFFALO LITHIA WATER.

SPRING No. 2.

IN THE TREATMENT OF

URIC ACID CALCULI.

ART. IV.—BUFFALO LITHIA WATER IN THE TREATMENT OF STONE IN THE BLADDER—ITS SOLVENT PROPERTIES—ITS VALUE IN BRIGHT'S DISEASE, CYSTITIS, ETC.

By JOHN HERBERT CLAIBORNE, M. A., M. D., OF PETERSBURG, VA.
Ex-President and Honorary Fellow Medical Society of Virginia, etc.

Reprint from the Virginia Medical Monthly of December, 1880:

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VOL. XVIII.

DECEMBER, 1890.

WHOLE No. 312.

No. 6.

*Paullum sepultæ distat inertie
Celata virtus.—HORACE*

The

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TABLE OF CONTENTS.

	PAGE.	Editorial Articles:	PAGE.
Superfætation; with the History of a Case.		Leprosy Question.....	477
By Dr. J. J. Gauthreaux, of New Orleans..	421	Popularizing Medical Knowledge.....	479
Proceedings of Societies:		Koch's Cure for Consumption.....	480
Report of Tenth International Medical.....		The Close of the Quarantine Season.....	483
Congress.....	431	Surgery.....	486
Orleans Parish Medical Society.....	442	Dermatology and Hygiene.....	489
Southern Surgical and Gynecological.....		Book Reviews and Notices.....	494
Association.....	454	Necrology.....	495
Richmond Academy of Medicine and.....		Publications Received.....	495
Surgery.....	472	Medical Items.....	496
Rapides Medical and Surgical Society.....	476	Mortuary Report.....	497
Correspondence.....	476	Meteorological Summary, September, 1890.....	498
		Publishers' Department.....	499

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NEW YORK.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XVIII.

DECEMBER, 1890.

NO. 6.

ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

SUPERFOETATION; WITH THE HISTORY OF A CASE.*

By DR. J. J. GAUTHREAUX, OF NEW ORLEANS, LA.

It is to be regretted, for the sake of science, that we have not the same facilities to make our physiological experiments and researches on human beings as we have on the lower animals; many doubtful and unknown facts would be brought to light; many intricate and obscure problems, now engaging the attention of the scientific world, would be solved in a conclusive manner. The human subject offers us but few favorable occasions to study the system of reproduction, whilst the animal kingdom is at our disposal, and at the mercy of the scalpel the experimenter. It is only by comparative anatomy and analogy that we can establish physiological functions in the human race.

The subject which is to engage our attention this evening is no exception to the rule.

The term superfœtation implies that a second impregnation may take place whilst a child is in utero. It has been a mooted question from time immemorial; this phenomenon has been admitted from the earliest ages. Aristotle mentions the fact in the fourth book, chapter the fifth, of his work on animal gestation; and Hippocrates mentions it in his work entitled

*Read at the meeting of the Orleans Parish Medical Society, held September 29, 1890.

“Superfœtation.” They thought it was possible, from the fact that they supposed the uterus of the woman to be formed like those of certain animals, which is composed of two or more lobes.

A better knowledge of anatomy, however, dispelled this error and taught us that the uterus of woman is composed of but one lobe. There are, perhaps, few questions relating to the question of conception that have given origin to more rigorous controversy; and, indeed, its important judicial bearings render it a subject of greater interest than it could ever have become, intrinsically, as a mere subject of abstract speculation, for under it rises the very important question of medical jurisprudence, upon which often rests the plea of legitimacy, the rights of inheritance of titles, and involving vast fortunes.

The ancient physicians and philosophers undoubtedly believed in the possibility of superfœtation; we find in the Mythology a well characterized example in the case of Iphicles and Hercules, who were begot of Alcmena; the former by Jupiter and the later by Amphytrion. Aristotle and Pliny entertained no doubt of the fact. In latter times, we find that the most eminent physiologists have sanctioned the same belief, and have been engaged in recording facts in its support.

Modern authors, in order to reject the possibility of superfœtation, have based their reasoning more on hypothetical ideas than on facts. No matter when and how conception takes place; whether the spermatozoa traverses the uterus and reaches the ovaries, there to fecundate the ovule, eliminated at stated periods, according to the best authenticated ancient opinions, or whether the ovule descends the fallopian tube to meet the spermatozoa, *in utero*, as taught by more recent authors, such as Negrier, Pouchet and Bischoff, the difference in the mode of fœcundation does not imply the possibility or impossibility of superfœtation. But many physiologists confound the term of superfœtation with a twin conception. They also make the terms superfœtation and superfecundation convertible.

Superfœtation supposes a certain time to have elapsed since the first pregnancy; whilst a few hours, or even a few days, time between the two pregnancies does not constitute a case

of superfœtation, but a case of superfœcundation. It is well known that the ovule is, sometimes, several days in its course from the ovary to the uterus, through the fallopian tube; it is equally well known that the spermatozoa, in favorable conditions, are often alive for several days after they have reached the uterus. One ovule may be fecundated the first or second day, and the other, four or five days later. This would constitute a twin pregnancy, but not a case of superfœtation. So also, in case of so-called superfœtation in multipara, as the bitch which has given birth to puppies of different species. The multilobular condition of the uterus, in these cases, well explain these phenomena. In the human species, where, in certain cases, the uterus is bilobular, it is only abnormally that we find that condition to exist.

The question is to know, first, whether superfœtation is really possible in the human species. Second, in the case where it is presumable, whether the uterus is not bilobular. It has often been questioned whether, after an ovule has been impregnated and passed down into the cavity of the uterus, another may not be fecundated, so that the products of two conceptions may undergo their respective development in the uterus and be delivered at an interval corresponding to that between the conceptions. Many physiologists have believed this to be possible, and have given it the name superfœtation. The case cited by Sir Everard Home, of a young female who died on the seventh or eight day after conception, exhibits that the mouth of the womb is, at an early period, completely obstructed by a plug of mucus, and that the inner surface of the uterus is lined by an efflorescence of coagulable lymph. When such a change has been effected, it would seem impossible for the male sperm to reach the ovary; consequently, the general belief is, that superfœtation is possible *only prior* to these changes, and where there is a second vesicle ripe for impregnation. Of this kind of superfœtation, it is probable that twins and triplets are examples, one at one copulation and another at the next; this is common in animals. The case cited by Sir Everard Home, of a bitch giving birth to a pointer and a setter is well known to every one. This case like many others cited as cases of superfœtation are nothing but cases of twins, the copulations

having taken place only a few hours apart; moreover, the uteri of the females of these species are multilobular.

The case of Buffon, in 1714, presents us with another very striking case of twins. A woman of Charleston, S. C., was delivered of twins, which came into the world immediately one after the other, but, to the great surprise of the midwife, one was black and the other white. The woman, herself, considering the proof of her infidelity too obvious to be denied, admitted the truth without hesitation, that shortly after enjoying the embrace of her husband, a black servant entered her room, and, by threats, accomplished his purpose. Harvey and Haller relate a case of superfœtation each.

Zacchias, however, thinks that superfœtation can only take place in the first two months of pregnancy. Haller expresses his opinion in the following words: "*Os uteri nunquam clausum est; ideoque potest superfœtari non solum a die sexto ad trigesimum, aut primis duobus mensibus, sed omni omnino tempore.*"

I will now quote several cases reported by more modern authorities, and different authors, to prove the possibility of superfœtation, for which I would beg your kind indulgence; for it is very important in cases of medical jurisprudence.

The best authenticated case of superfœtation that has occurred is that communicated to the College of Physicians by Dr. Maton. "Mrs. T., an Italian lady, remarkable for her fecundity, was delivered of a male child, at Palermo, on the 12th of November, 1807, under very peculiar circumstances, having been dropped on a bundle of straw, in an uninhabited room at midnight, and although the infant at the time of his birth had every appearance of health, he lived only nine days. On February 2, 1808, not quite three calendar months from the preceding accouchement, Mrs. T. was delivered of another male child, completely formed and apparently in good health; the child, however, fell a victim to the measles at the age of three months."

Dr. Granville, in a paper entitled, "On the Malformation of the Uterine System," says that the above may be merely a case of twins, one delivered at six months, and the other at nine months of pregnancy; owing to the ova being quite dis-

inct and separate. In consequence of the doubt thus expressed by Dr. Granville, Drs. Paris and Fonblanque applied to Dr. Maton for further explanation of those particular points upon which the merits of the case would seem to turn, and he is thus able to clear the doubts which might be supposed to embarrass its history. The fact is that both children were born perfect; the first could not, therefore, have been a six months' child. Dr. Granville, with respect to the *distressing circumstances*, appears to have fallen into an important error; he speaks of them as having brought on the premature contraction of the womb, so as to expel a part of its contents in November; whereas, upon referring to the particular expressions used by Dr. Maton, in the paper alluded to, we shall soon perceive that they by no means support the assumption; nor that it was *brought* on by distressing circumstances; on the contrary, we find upon further inquiry that the distressing circumstances to which the author alludes were the natural consequences, not the active cause of labor; that the labor, although quick, was not sudden, and that it was not premature, for the natural period of uterogestation was supposed to have been completed."

The following is taken from the Consilia of Zacchias: "J. N. Sobrejus lost his life in a quarrel, leaving his wife pregnant; eight months after his death she was delivered of a deformed child, which died in the birth. Her abdomen remained large, and it was suspected that a second child was contained in it, but all efforts to produce its delivery proved fruitless. One month and a day thereafter the woman was again taken in labor, and brought forth a perfect living child. The relations of the husband contested the legitimacy on the ground that it was the fruit of superfœtation, and Zacchias was consulted on the subject. He agreed that the two children could not be the fruit of one conception, since the interval between their births was so great; but advanced as his opinion that the first born was the product of superfœtation, and conceived a month after the other. This he strengthened by the fact that the husband died suddenly, while in a state of perfect health. His opinion preserved the character of the mother, and also gave her those legal rights to which her situation entitled her."

Denman, in his work on midwifery, quotes a case belonging to the subject before us. The female went to the ninth month of pregnancy, but, between the fifth and sixth months, she met with a great fright, which affected her severely and diminished her size. On the 11th of February she was delivered of a healthy child, but continued in pain, and it was not until the morning of the 25th that she was relieved. On that day there was born the head and parts of a child that had just the appearance of a miscarriage of four months. The case communicated to Foderé by Dr. Desgranges, of Lyons, is certainly very interesting. The wife of Raymond Villard, of Lyons, married at twenty-two and became pregnant five years after, but had an abortion at seven months. On the 20th of May, 1779, she conceived again within a month, and on the 20th of January, 1780, eight months after her delivery and seven months after her second conception, she brought forth a living child; this delivery was not, however, accompanied with the usual symptoms; no milk appeared; the lochia were wanting, and the abdomen did not diminish in size. It was accordingly necessary to procure a nurse for the child.

Desgranges being called, declared there was another child in utero. Five months and sixteen days she was again delivered of a second living daughter; the milk now appeared, and she was then able to nurse her child.

Among modern authors I beg to quote the following conclusive case recorded by Dr. Tyler Smith. "A young married woman, pregnant for the first time, miscarried at the end of the fifth month, and some hours afterward a small clot was discharged inclosing a perfectly healthy ovum of about one month. In this case the patient had menstruated regularly during the time she had been pregnant." This case is of special interest from the fact of the patient having menstruated during the whole time of her pregnancy, a circumstance explicable on the same ground which renders superfœtation possible! The main objection to the possibility of superfœtation is based on the hypothesis that the decidua so completely fills the uterine cavity that the passage of the spermatozoa is rendered impossible, that their passage is prevented by the mucous plug which blocks the cervix, and that when impregnation has

taken place, ovulation is suspended. It is certain, however, that none of these obstacles are insuperable to a second impregnation.

The first objection was originally based on the older and erroneous views which considered the decidua to be an exudation lining the entire uterine cavity, and sealing up the mouths of the fallopian tubes and the aperture of the internal os uteri.

The decidua reflexa, however, does not come into apposition with the decidua vera until about the eighth week of pregnancy; until that time there is a free space between the two membranes, through which the spermatozoa may pass to the open mouths of the fallopian tubes, and in which a new ovule may graft itself. According to M. Coste, in his lectures which I attended at the College of France, in 1849, on experimental physiology, he states that there is no obstacle, as far as the decidua is concerned, to prevent the descent and lodgment of another impregnated ovule.

As regards the plug of mucus, it is pretty certain that this is in no way different from the mucus filling the cervix in the non-pregnant state, which offers no obstacle to the passage of the spermatozoa.

The orgasm and violent erethism in the act of copulation may cause the contraction of the oviducts, and neck of the uterus, which might cause the expulsion of those mucous plugs. As regards the cessation of ovulation during pregnancy, this is no doubt the rule, and probably satisfactorily explains the rarity of superfœtation. There is, however, a sufficient number of well authenticated cases of menstruation during pregnancy to prove that ovulation is not absolutely in abeyance, and as long as it occurs, there is, unquestionably, no positive mechanical or physical obstruction, at least in the early months of pregnancy, in the way of impregnation and lodgement of the ovules that are thrown off.

The plausible conclusion, therefore, seems to be that although a large majority of the supposed cases are explicable in other ways, it can not be admitted that superfœtation is either physiologically or mechanically impossible.

Dr. Mathews Duncan and others have shown that there is communication between the vagina and ovary for a considera-

ble time, a few months after fecundation, and Dr. Tyler Smith has demonstrated that the mucous plug is no great barrier to the ascent of the spermatozoa. Moreover, the latter believes the decidua to be open; that there is a breach in it at the upper end of the cervix. Hunter held that there is a similar opening in the decidua opposite the uterine terminations of the oviducts. Thus the way would be very patent, and the explanation of superfœtation not very difficult. There are cases, moreover, proving it. One is reported by Dr. Eisemann, of Strasburg. A woman was delivered of a second mature child four months after the first, which was also mature. In this case there was an autopsy and it was found that the uterus was single.

Another plausible reason we have of possible superfœtation is met in cases of hydrorrhœa, where an abundant secretion takes place from the glands of the body of the uterus and runs down between the body of the uterus and the decidua, affording a passage to the spermatozoa up the fallopian tubes; or may allow the passage of a matured ovule into the cavity of the uterus, and become impregnated several months after the first pregnancy.

I have seen many cases of hydrorrhœa, in private practice, where the woman was considerably annoyed by this frequent flow of the waters, as they term it. Any sudden movements of the body, or stepping down from a carriage, or other reasonable height that required a certain amount of bodily exertions, produced this troublesome flow, for which I have often been consulted.

I have had, also, many cases where monthly bloody discharges from the uterus occurred, presumably the catamenia; some for two, three or four months in succession, for which I was invariably consulted; others, though less frequent, through the whole period of uterogestation. I have now a case under observation. She is now eight months pregnant and expects to be confined (or was) at the end of this month, September, or early part of October. She menstruated regularly at every monthly period for four or five days, as naturally as if not pregnant.

I think all these circumstances are more than sufficient to prove a clear passage from the uterus to the fallopian tubes, even in a pregnant state.

If ovulation is possible in a case of a double uterus, as it is admitted by physiologists, why should it not take place in a single uterus? The pregnancy in cases of a double uterus, where superfœtation is admitted, certainly proves the ovulation to be possible even in cases where a woman is already pregnant.

CASE.

Mrs. L. P., aged 34 years, a blonde, with a good constitution, mother of six children, and two abortions before the triplets, is the subject of this report. She menstruated for the first time at the age of 14, and regularly thereafter. She was married at 19, and had her first child at 20.

The history of her last pregnancy is as follows: She had her menses August 24, 1889, which continued four days. She saw nothing from that date till October 1, considerably more than usual. November 15 she had another hemorrhage, rather more profuse than on October 1, and left her in a debilitated condition, for which she sent for me. I advised vegetable tonics, under which she recuperated. December 26 and 27 she again lost blood per vaginam, but scantily. During January and February, 1890, she had an occasional slight hemorrhage, after which she had frequent flow of a whitish yellow fluid from the vulva up to her confinement, June 13, 1890. She thinks she became pregnant about the middle of October, 1889. She felt quickening March 4, four and a half months after the time from which she dates her conception. Says she always felt quickning invariably at four and a half months after the time she became pregnant in all of her previous conceptions.

I was called June 13, at 5 o'clock A. M. On my arrival at the house, at 6 A. M., I found a pair of twin boys just issuing from the vulva, supposed to be about three and a half months, being between five and six inches long; of natural appearance in every way; there was no cyanosis or ecchymosis on any part of the body, which indicates that they could not have been dead for any considerable time previous to their birth.

There was but one placenta, with two distinct umbilical cords with separate attachment. The placenta was attached to the lower third of the right side of the uterus, the edge so close to the os that it suggested to my mind a case of placenta previa.

I cut the cords and left the placenta undisturbed. The midwife, who had been in attendance since midnight, stated that the flow of waters was not very abundant at the birth of the twins.

Noticing that the abdomen was still large, I ascertained the presence of a third child *in utero*, much larger than those already born; the movements of the child were strong and very perceptible to the hand placed on the abdomen. I could feel the head of the child way up through the partially dilated os uteri. Being convinced that this was a case of superfœtation, I ordered the woman to remain perfectly quiet, in order to save, if possible, the third child. The woman having no more labor pains, and resting easy, I left the house at 8 o'clock A. M., under the care of the midwife, with instructions to send for me in case any labor pains should supervene before my intended visit in the evening. There were no more labor pains till 4 o'clock P. M., when they returned, but of a feeble character.

The midwife, contrary to my instructions, not to interfere in any way, in my absence, gave her a teaspoonful of fluid extract of ergot at half past 4, which brought the child in the lower pelvis. All labor pains having ceased, I was sent for again in a hurry at 6 o'clock P. M. On my arrival, I found the head of the child low down in the vagina. The woman being exhausted, I applied the short forceps and delivered the mother in a few moments of a child apparently seven and a half months, the navel cord encircling the neck of the child. The placenta was attached to the fundus of the uterus. There being no cause for immediate interference, I allowed her to rest half an hour, after which I extracted the secundines.

Both the placenta and cord were of natural size and length at the seventh month of gestation. Then I followed the two navel cords of the twins, up to the placenta, which had not been disturbed in the morning, and was still attached to the lower third of the uterus; I had to detach it with my finger. Both placentas and cords were proportioned to the respective ages of the fœtuses. The amnion and chorion were distinct and entire in both placentas. The small placenta was about four inches in diameter, the larger one about seven inches. The

younger foetuses were about five inches long, and the older one about fifteen.

I took particular care to ascertain whether the uterus was single or double; there was but one cervix and one uterine cavity.

The mother had milk on the third day, with slight fever on the second day, with thermometer at 101 deg. The woman made a good recovery. As a finale, I will relate to you a little incident. As I was leaving the room, after seeing the wife comfortably in bed, the husband, confused at the rich harvest, remarked to me: "Doctor, I am a poor man, and have not had work for some time. I hope you will be as lenient as possible toward me." The wife, undaunted by the eventful day, replied: "God knows if you have not worked outside, you have worked hard enough inside."

PROCEEDINGS OF SOCIETIES.

THE TENTH INTERNATIONAL CONGRESS.

Held at Berlin, August, 1890.

SECTION OF HYGIENE.

[By our own Correspondent.]

Discussion of the measures to be taken against the spread of diphtheria by Roux of Paris, Löffler of Greifswald, Wachsmuth of Berlin, Fränkel of Königsberg, Petri of Berlin, Drysdale of London, Litthauer of Schrimur, Kowalski of Vienna, Danneil of Berlin, Altschul of Prague, and Erismann of Moscow.

The first reporter upon the subject under consideration, Dr. Roux, of Paris, was represented by D. Mardochée-Haffkine, assistant at the Pasteur Institute at Paris. In the name of Dr. Roux, Dr. Haffkine read the following propositions:

1. The first condition for combating the diphtheria was to diagnose the disease. For this purpose the bacteriological method is to be particularly recommended.

2. As the diphtheritic virus, also after the recovery of the respective patient, might still remain behind for a long period in the oral cavity and also preserve its infectious character there, those patients who had recovered from diphtheria had

to be excluded from intercourse with healthy persons as long as they were still infected with the germs.

3. As the diphtheritic virus remained infectious for a long time in its dried condition, all things used by the patient should be disinfected by boiling or by steam. The clothing, the bed-clothes, the bed-covers, etc., should to be disinfected before being washed.

The dwelling rooms as well as the cars used by the respective patients should to be subjected to thorough disinfection.

The visits on the part of the patients' relations in the hospitals in which diphtheria prevails should be limited as much as possible, owing to the danger of the propagation of the disease.

On entering the respective hospital, special cloaks should be put on, which must be put off on leaving the hospital. The face and the hands must be disinfected after the visit.

School children must from time to time be submitted to a medical inspection with reference to the condition of their pharynx, particularly when a case of diphtheria had occurred among them.

4. In the treatment of angina, which occurs in the case of scarlet fever and measles, the mouth and the pharynx of the patient should be repeatedly washed with antiseptic remedies.

The second reporter, Prof. Loeffler, of Greifswald, said that he hoped that at present, as we knew the specific pathogenic agent of diphtheria, we shall be able to do more in combating this extremely dangerous disease. An enemy whom we know need not be feared as much as an unknown adversary.

The bacillus of diphtheria (the bacillus of Löffler) could only be found in the local products of the pharyngeal mucous membrane, and spread therefrom only by transmission. Strict isolation of the patient was thus urgent.

The patient's room, on account of easy disinfection, should contain, besides the bed, only the most necessary things. As strict isolation is impracticable in private practice, the transfer of the respective patients into special hospitals should be most emphatically insisted upon.

Also Prof. Löffler recommended disinfection of the clothes, the dwelling rooms, etc.

The infectiousness lasted longer than the symptoms of the disease. As long as membranes were still present in the pharynx, bacilli of diphtheria could also be found there even five days after the disappearance of the affection. In one case Prof. Löffler had found bacilli of diphtheria over the pharyngeal mucous membrane three weeks after the date of the disappearance of the fever. The lecturer recommends isolation

of the patient for at least four weeks and bacteriological examination for the presence of bacilli during the same period. The microbes of diphtheria possess considerable vital power. When dried up on silk threads for three weeks and afterward dried up in the "exsiccator" for from ten to fourteen weeks, the microbes could still thrive. These data were in conformity with the results of the epidemiological observations. Cases of infection were, however, known in which the virus was from one to two years old. We can thus infer that the bacilli of diphtheria preserve their virulence in the moist condition for a very long period. The investigations on this point are not, however, yet concluded.

For the diphtheria, the bacillus found in man was the sole pathogenic agent. In the pseudo-membranous affections of the animals, the bacillus had not yet been proven. The communications of Klein on the presence of bacilli of diphtheria in a diphtheria-like disease of the cats, and on the affection produced in cows by means of the inoculation of these bacilli, were at present not yet reliable and need yet to be confirmed by control-experiments. If the bacilli of diphtheria had frequently been met with in the milk, it could not yet be concluded that they got there from the organism of the cow, but they could find their way there from diseased men in whose rooms the milk stood uncovered. As milk offered a favorable soil for the development of these micro-organisms, they thrive there for a longer time and spread further through its use.

The pseudo-membranes of scarlet fever and measles equally formed a favorable soil for the bacilli of diphtheria. But even the sound, unaffected pharyngeal mucous membrane is not protected against the invasion of the bacilli. In epidemics of diphtheria the children must gargle, in a prophylactic way, with antiseptic remedies, and particularly when they are suffering from any affection of the pharynx.

The statements of Brühl and Fahr, viz., that the climate and the conditions of the soil had some influence on the spread of diphtheria, were due to false statistical assertions.

According to the more reliable statistics of Rath the maximum of the cases of diphtheria occurring in Germany lay between the rivers Ems and Oder, and then decreased toward the east and the west. Diphtheria occurred most frequently in Schleswig-Holstein, Mecklenburg and Hanover, and not (as was stated by Brühl and Fahr) in Eastern Prussia.

The statistics of the hospitals and the army gave the same results. Heretofore a causal connection between climatic conditions and the occurrence of diphtheria had not yet been proved in Germany, and the same was true of Norway, accord-

ing to the statements of Schaunessen. Only the accumulation of persons living under unfavorable sanitary conditions favor the spread of the disease. Prof. Löffler, for this reason, claimed the supervision of the school children by school physicians and a construction of the dwellings corresponding to the claims of hygiene. The lecturer summarized his paper as follows:

The bacillus of diphtheria is the sole cause for diphtheria; its spread only took place through the "excreta" of the patient; an early and sure diagnosis is only possible by the proof of the bacilli of diphtheria. As the bacilli, which are suspended in the air, settled on the most various objects of the patients' rooms, and, furthermore, on the clothes of healthy persons, care must be taken to disinfect the former thoroughly.

Patients suffering from diphtheria should be isolated immediately after a positive diagnosis had been made, and should be excluded from intercourse with other people even for some days after the plague disappears. School children must not be sent to school until four weeks after their recovery. The disinfection of objects suspected of containing bacilli of diphtheria should be carried out by means of boiling water or a current of steam.

For the disinfection of the dwelling rooms a 1 per cent. solution of sublimate must be used, and the walls rubbed by means of bread. Moist and dark dwellings must be sewered. The dwellings, and particularly those in which cases of diphtheria had occurred, should be thoroughly disinfected at the periods when the dwellings were changed for others.

The milk traffic should be under the control of the authorities.

The so-called diphtheritic affections of animals are related to human diphtheria. The transmission of diphtheria may occur indirectly by means of a third person. In the case of epidemics of diphtheria, the children ought to gargle regularly with weak solutions of sublimate (1 to 1000) or aromatic waters. The children in the schools should be carefully watched.

Dr. Wachsmuth, of Berlin, urged as a prophylactic measure against diphtheria the obligatory cleanliness of the courtyards, and the prohibition of the swill boxes being transported from one place to another in a dry condition, as on such an occasion germs of infection might get into the low dwellings in dust. The swill boxes ought to be disinfected with carbolic acid or boiling water. As to the therapy

for diphtheria, the lecturer would recommend the so-called hydriatic procedure invented by him.

Prof. C. Fränkel, of Königsberg, said that he believed that for the infection with bacilli of diphtheria a certain predisposition, at least a lesion of the mucous membrane of the pharynx, was necessary, as the bacillus of diphtheria had already frequently been detected in the saliva of quite healthy persons.

Prof. Löffler replied that such cases were very rare, and could prove nothing if we took into account the fact that with the disappearance of the disease also the bacilli disappeared from the mouth and the pharynx of the patients. A quarantine was, however, nevertheless necessary in the case of recoveries.

Dr. Petri, of Berlin, said with reference to the proposition of Dr. Wachsmuth respecting the disinfection of the swill boxes, that owing to the numerous important experiments carried out by him on this subject, the dust of the swill boxes contained but very few micro-organisms and was composed of only inorganic particles.

Dr. Drysdale, of London, remarked that in London, since the systematical removal of rags and sewage, the cases of diphtheria had decreased considerably in number. The lecturer stated that he had always been of the opinion that diphtheria was not exclusively due to direct transmission, but also to the infection of the sewage canals and to unclean and moist dwellings. He also urged the improvement of the hygiene of the dwellings.

Dr. Litthauer, of Schrimur, declared that the latter was impossible in the poor population. In the school the children should be directed to spit only into spittoons. People should be instructed as to the dangers resulting from carelessness respecting the spittoons.

Dr. Kowalski, of Vienna, laid much stress on the anti-septic treatment of diphtheria. By brushing the pharynx with a 4 per cent. solution of carbolic acid he had succeeded on one occasion in totally destroying the bacilli so that they could not any longer be found in the plaques of the pharynx, which still persisted for eight days. For the disinfection in private dwellings, chemical substances were more convenient than a current of steam.

Dr. Danneil, of Berlin, stated that from the standpoint of a medical practitioner, he could not agree to the conclusions of Prof. Löffler, so much the more as the bacteriologists themselves were not yet of one opinion on the question of diphtheria. The gargles with sublimate, recommended as a prophylactic measure, might become dangerous, just as the

prophylactic washings with sublimate in the case of pregnant women, and the instillation of the nitrate of silver into the eyes of the new-born children for preventing blenorrhœa.

Dr. Altschul, of Prague, remarked that the fact that in Prague the diphtheria particularly predominated in the quarter of the well-to-do people led him to conclude that dark and moist dwellings did not favor the spread of diphtheria to so great an extent as was stated by some of the speakers. It was, indeed, to be frequently found in new-built houses, which had also been stated by Huebner to be true with reference to the city of Leipsic. He thought, from an epidemiological point of view, and from practical reasons, that a four weeks' quarantine of the school children was too long.

Dr. Erismann, of Moscow, did not consider the large accumulations of people as a preliminary condition for the origin of epidemics of diphtheria. In Russia diphtheria was far more frequently met with in the villages than in the large towns.

At the conclusion of the discussion, Prof. Löffler expressed his satisfaction at many members of the section having agreed to his conclusions. He thought that the treatment with carbolic acid and other antiseptics recommended by Dr. Kowalski was very efficacious in the case of diphtheria. The disinfection of the dwellings with chemical substances, however, was not to be recommended, owing to the poisonous properties of the respective substances. As to the apprehensions of Dr. Danneil respecting the danger of the prophylactic gargles they were quite groundless in the case of the aromatic waters, which were equally antiseptic and possessed no poisonous influence.

The necessity of a certain predisposition or lesion of the mucous membrane for the development of diphtheria had already been recognized by the lecturer a long time ago for most of cases; he would, on this occasion, only add that the virus could also penetrate intact mucous membranes.

The epidemiological conditions certainly well deserved due attention, but they had not hitherto furnished any valuable explanation with reference to the character and spread of diphtheria. In contrast with the statements of Dr. Erismann, it must be remarked that the influence of agglomeration on the spread of diphtheria had been proved in Sweden.

SECTION OF INTERNAL MEDICINE.

Discussion on Myxœdema.

Dr. Ord, of London, who opened the discussions on myxœdema, gave a general sketch of the present position of the

question of myxœdema, and emphasized some prominent points in the matter. In the first important work on myxœdema, by the late Sir William Gull, it was stated that the affection was chiefly to be met with in the female subject, and, in conformity with this statement, Dr. Ord had found that the proportion of the affected men to the affected women was 1 to 10.

The question of the heredity of the disease continually assumed a greater importance. As the disease of myxœdema had only become known in the last years, our knowledge of the antecedents of the ancestors of those suffering from myxœdema was very scanty. Dr. Ord mentioned some cases in which the heredity was placed beyond any doubt, and he wished that the profession might direct greater attention to this point. From a great number of his respective observations it became evident that not only in various individuals, but also in one and the same individual, the general symptoms as well as the special symptoms of myxœdema showed a great tendency to undergo changes from time to time. The swelling of the skin, the speech, and particularly the nervous symptoms, were subject to considerable changes. An exact observation of the cases of myxœdema was thus of the greatest importance, both with reference to diagnosis and pathology, as a great number of patients lose the characteristic conformation before death.

The lecturer wished to emphasize the fact that in numerous cases of myxœdema an enlargement of the thyroid gland was present at an early period even before the occurrence of any symptoms; this enlargement of the thyroid gland, however, could not any longer be observed when the respective patient came under observation. Dr. Ord mentioned a case in which symptoms of myxœdema, goitre and exophthalmia had occurred simultaneously at an early period. This coincidence seemed not to be without importance with reference to the position of myxœdema in pathology. A tendency toward hemorrhage had repeatedly been observed in myxœdema, and this formed one of the most serious dangers accompanying this disease.

Dr. Ord, furthermore, stated that as to the morbid changes, they had to be considered from two points of view, viz., the changes of the thyroid gland and those of the other organs. As to the first he could find out by numerous observations that the structure of the gland had entirely disappeared, and with reference to the latter the views of investigators do not all agree. The lecturer believed that in the typical cases of myxœdema a hypertrophy of the connective tissue was pres-

ent, not only in the skin, but in all the parts of the body, which was very rich in nuclei combined with products of inflammation which destroyed the proper tissue of the various organs.

Speaking of the chemical properties of the tissue, he wished to emphasize the fact that he had used the term myxœdema for two chief reasons; first, for clinical reasons, as the swelling of the skin did not disappear on pressure with the finger—it was rather elastic; secondly, from a chemical point of view, as in the tissues of the first case of myxœdema (the patient died during the acme of the affection) a considerable excess of mucus was found. Further experiments did not, however, confirm the results of the first case. This, perhaps, depended on the changes of the disease and the condition under which the patient died.

The lecturer discussed the interesting experiments of Horsley on the results of the removal of the thyroid gland in animals. These experiments seemed to prove that the operation was followed by symptoms very similar to those of myxœdema, and that the progress of the results occurring after the extirpation of the thyroid gland was chiefly favored by the surrounding temperature. By warmth the development of the myxœdematous appearances was arrested, and by cold it was accelerated.

It was to Felix Semon that we owed the knowledge of the identity of the so-called cachexia strumipriva with myxœdema. From a report of Felix Semon on a great number of cases of the so-called operative myxœdema it became evident that the identification of this disease with the spontaneous myxœdema was justified. Also the sporadic cretinism had to be considered as being identical with the myxœdema, but the myxœdema particularly affected adults, whereas sporadic cretinism was chiefly to be met with in children or was innate.

In the latter the symptoms of myxœdema were still attended with deficiencies in growth and development. Finally, Dr. Ord mentioned the probable relations of the destructive diseases of the thyroid gland with endemic cretinism. Summarizing the contents of his lecture, Dr. Ord explained the fact that myxœdema, cachexia strumipriva, sporadic and endemic cretinism as well as operative myxœdema in animals, were always attended with a common symptom, namely, loss of function of the thyroid gland, which seemed to be the near cause for these various conditions. The remote causes were, indeed, different in the various affections, and taking into account the preponderance of myxœdema in the female subject, we should, perhaps, ascribe an important part to the sexual organs.

The treatment of myxœdema with drugs and climate is of no value.

As to the modern experiments of the transplantation of the thyroid gland from animals to men the curative results were not yet certain.

Prof. Mosler, of Greifswald, said that after the audience had listened to the instructive paper of Dr. Ord, they will scarcely expect to hear him discuss this subject in detail. He had charged himself with the second report on the question of myxœdema, first thanking Dr. Ord for his kindness in making known to us his vast experience. From the mouth of a German physician, the veneration and admiration for his excellent works should be expressed to him. It was known that we owed to him the first knowledge of the typical complex of symptoms of myxœdema, which was known as a disease *sui generis*. It was at his suggestion that the London Medical Society, in 1884, appointed a commission of learned men for studying the question of myxœdema. This undertaking was attended with the most excellent results. A glorious example for collective investigations was thus given for all times. The classical lecture which Rudolf Virchow had delivered before the Berlin Medical Society had become of particular importance to German physicians.

The German specialists for internal medicine, as well as the German surgeons, have since that time begun to devote particular attention to the disease under consideration.

Its complex of symptoms had the same origin as the appearances which have so frequently been observed after the extirpation of goitre. It was for this reason that the president of the German Congress of Surgeons, Prof. v. Bergmann, had asked the lecturer to demonstrate a selected case of myxœdema, which the lecturer had the opportunity of observing, to the surgeons who had gathered on that occasion in Berlin.

The comparison with a case of cachexia strumipriva, which had been demonstrated at the same time, proved the identity of both the affections.

Prof. Mosler pointed out that, as was known, the consecutive symptoms of the total extirpation of the thyroid gland were acute or chronic, and appeared in the form of tetany or myxœdema. In cases in which they were not observed either an accessory gland was present or a portion of the goitre or the gland had remained behind. In the opinion of Prof. Mosler, it was not yet justifiable to deny a causal connection in genuine myxœdema by referring to the inconstant behavior of the thyroid gland.

It was not the quantity of the substance of the thyroid gland

which remained behind which ought to be taken into account, but the degree of functions of the remaining parts was of importance. The thyroid gland seemed to play an important part in the organism of the animals and men. Its gradual suppression, owing to slow degeneration of the glandular tissues, produced the chronic course of genuine myxœdema.

The lecturer now gave the description of a highly interesting case of myxœdema which had come under his observation at the clinic of Greifswald. The patient was a woman, 56 years old, in whom all the characteristic symptoms of myxœdema had been extant. Her photograph (which the lecturer showed to the audience) already proved this. The picture was that of a nearly complete idiot, with stupid and apathetic expression of the face and swollen, half-closed eyelids. Besides this there was a great number of nervous symptoms. Moreover, the characteristic swelling was to be observed over the whole body, the face, the neck, the trunk, the extremities, and even some of the mucous membranes. The consistence of the swelling was another feature in the case of ordinary anasarca. On feeling, one obtained the impression of an elastic mass, such as gelatine used for cultures. The peculiarity of the myxœdematous swelling was caused by the presence of mucin of the subcutaneous cellular tissue. Extraordinary heaviness of the whole body and impaired faculty of walking of the swollen extremities was thus produced. All these changes had come on during the interval of six years.

Professor Mosler concluded his paper by stating that if he had succeeded in awaking interest for this important disease in the majority of the members gathered on this occasion, and if the demonstrations which had taken place on this occasion should facilitate the respective diagnosis, the purpose of his few words was attained.

SECTION FOR INTERNAL MEDICINE.

On the treatment of pulmonary phthisis, particularly in the hospitals for consumptives.

Dr. Weber, of London, discussed the present position of the drugs, and designated them as an auxiliary means for general strengthening and symptomatic treatment. He, however, did not think it impossible that a remedy could ever be detected which checked the growth of the bacillus without damaging the organism. The essential feature of the present treatment, however, consisted in the hygienic dietetical directions and the way of living of the consumptive patients. He attached much importance to the climate and the place of

treating, but not as a specific remedy, or owing to the alleged immunity of certain regions, but owing to the advantages which certain climates had in raising the nutrition and the strengthening of the whole organism, and particularly the respiratory and circulatory organs.

Owing to the limited time of his lecture, he could not dwell long upon the various climates, but only wished to emphasize the advantages of some climates in the high regions. Dr. Weber, however, supposed that the treatment and recovery of phthisis was everywhere possible where pure air during day and night and convenient nutritives could be obtained. The chief point of the treatment must everywhere consist in the amelioration of the nutrition and the strengthening of the whole body, and all the organs, particularly the lungs, the heart and the blood vessels. He reminded the audience of the non-rarely successful treatment of other chronic diseases, for instance, the heart, the digestive organs, the nervous system, by raising the general conditions according to the principles of general therapy.

The lecturer particularly laid much stress on the most exact arrangements in the use and the quantity of free air, the nutrition, the movement or rest, respectively, the clothes, the situation and ventilation of the dwellings and sleeping rooms, and the necessity of the accommodation of these important influences to constitutions, and to the stages of complication in various diseases.

Dr. Weber reminded the audience of the excellent results which had been obtained at Gerbersdorf and Falkenstein, under the direction of Brehmer, Dettweiler and Meissen, and later on also at Reiboldsgrün, under the direction of Dr. Driver, and also mentioned the favorable results which had been obtained at the Adirondack Cottages Hospital (Saranac lake, New York), under the direction of Trudeau.

The lecturer now proceeded to speak of the treatment of the poor in asylums, for these were not able to take care of themselves, and could not even know what was good for them and what damaged them. The arrangement of most of general hospitals was insufficient for the successful treatment of the consumptives, and the space was in most cases insufficient for the admission of the great number of these patients; for this reason they were obliged to remain in their narrow dwellings, which were quite improper for their recovery, but, however, presented very favorable conditions for the spread of the diseases.

The large and small hospitals for the treatment only of diseases of the chest which existed in England have furnished

favorable results, and were much appreciated by the patients themselves.

In conclusion, Dr. Weber stated that he hoped that private charity would assist the works of the State and communities, and urged upon them the formation of societies for the establishing of asylums for consumptive poor.

Discussion.

Prof. Leyden, of Berlin, directed attention to the impulse which had recently been given also in Germany toward the establishing of sanitariums for consumptive diseases. Acting on the authority of the International Congress, all the difficulties which were encountered in this direction would be so much the more easily surpassed. Though hygiene and prophylaxis now receive much attention, they should not, however, be permitted to make us neglect the duties which the physician owes to the patient.

Even when we should dispose, in future, of remedies which capable of checking the further spread of the tubercle bacilli, we should nevertheless have to make use of another treatment of the patients affected with pulmonary phthisis.

According to the opinion of Leyden, the treatment of pulmonary phthisis in asylums has hitherto been looked upon as the most reliable one, but the results obtained by climatic influences were also of great value.

Dr. Dettweiler, of Falkenstein, declared that he was happy to hear that the treatment of pulmonary phthisis in asylums was sanctioned by the congress.

Dr. Kretschmar, of New York, declared that in spite of the innate pride of the Americans, who supported a treatment in sanatoria only with difficulty, the latter had nevertheless made great progress, and that also here copious nutrition, air and light were the leading principles for the treatment.

Prof. Cantani, of Naples, Dr. Pries, of Copenhagen, and Prof. Fürbringer, of Berlin, spoke to the same effect.

[*To be continued.*]

ORLEANS PARISH MEDICAL SOCIETY.

MEETING OF SEPTEMBER 29, 1890.

Dr. Chassaignac, president, in the chair.

After the transaction of routine business, Dr. J. J. Gauthreaux read a paper on Superfœtation.*

*Paper is published in this number. See "Original Articles," page 421.

DISCUSSION.

Dr. F. Formento said he had had no personal experience with superfœtation, but that it does happen in *rare* instances can not be denied, although not admitted by many. He thought Dr. Gauthreaux's case presented such phenomena as to justify the belief that it was a real case of superfœtation, and not one of arrested development.

Dr. R. Matas said that, notwithstanding the skepticism of eminent authors, the possibility of superfœtation could hardly be denied, and there were many points in the case just reported that would lead to the supposition that it was one of superfœtation; still it might be claimed by those who opposed the theory of superfœtation that the case was one of arrested development.

Dr. Chas. Chassaignac thought the case was as much entitled to be called superfœtation as any yet reported. The history of the case, together with the appearance of the fœtuses, cords and placentas, leaves but little doubt as to the nature of the case. Had it not been for the interference of the midwife, the largest fœtus might have gone to the full period of gestation and been delivered alive.

Dr. F. W. Parham said, if no ergot had been administered, and the fœtus had gone to full development, it would have added nothing to the argument in favor of superfœtation, as it was the best developed of the three fœtuses.

Dr. A. McShane said, if the first ovule had become imbedded in the mucous membrane of the fundus, the second and third ovules might have slid down past the decidua reflexa to be arrested near the internal os. The low attachment of the placenta of the smaller fœtuses bears out the view that the case was one of superfœtation; for, in the normal state of affairs, an ovule remains at the fundus and there develops; a subsequent ovule, impregnated when the first has already occupied the uterus for some time, would have to select some other place besides the fundus for its point of attachment or development. This seems to have taken place in the case of Dr. Gauthreaux.

Dr. Gauthreaux stated that all was perfectly formed and no apparent change had taken place.

Dr. Chassaignac thought the small fœtuses could not have died and remained in the uterus four months, unchanged. If we admit the arrest of development in such cases superfœtation can never be proven.

Dr. Parham referred to the French law making the first delivered of twins the youngest child.

Dr. Formento thought that this law was a mistake; the age

of a child should begin with its entrance into the world. Age should be counted from *birth*—a material fact of easy demonstration—and not from the period of *conception*, the most mysterious of all vital phenomena. In the past, it was not the *law* but popular opinion that *decreed* that the last born of twins was the oldest (primogenitus). This belief undoubtedly gave rise to one of the numerous legends concerning the Man in the Iron Mask. It was said by many that after Louis XIV was born and had been presented to the populace as the King of France, his mother, the Queen, gave birth to another child, twin of the first born, and who, having been born *last*, was, according to the prevailing idea, the true heir to the throne. To prevent political complications and possible wars, the child was carried away, hidden, and when he became of age he was condemned to wear at all times an Iron Mask and incarcerated for life in the Castle of Fenestrelle. Such is the legend, and according to some historians, the true history of "*l'homme au Masque de Fer*." Nowadays, the laws of every civilized country decree, I believe, that the first born of twins is the oldest or *primogenitus*.

Dr. Gauthreaux, referring to the question of menstruation during pregnancy, mentioned a case of pregnancy in which menstruation continued during the entire period of gestation. To prove that it was a true menstrual discharge, a part of the blood was collected as it escaped from the os and there was no coagulation.

Dr. R. Matas then reported a case of

Parasitic Chyloccele of the Tunica Vaginalis Testis.

which had come under observation in the out-door clinic of the Charity Hospital.

The patient, a native of Cuba, had been in this country only nine months. He stated that his left testicle had been enlarged for three years, but had caused no trouble.

Of late he had been troubled with seminal emissions, which he supposed were due to the increased size of the organ. On examination the testicle was found to be three or four times larger than that of the opposite side.

The enlargement had not the appearance of hydrocele, and its contents seemed to be semi-solid.

A hypodermic syringe revealed the presence of a fluid resembling milk and established the diagnosis of *chyloccele*.

This fluid was examined microscopically by Dr. A. McShane and found to contain a large number of the embryos of the *filaria sanguinis hominis*.

The blood was also examined, and while it swarmed with

the embryos at night, toward morning they began to disappear and during the day none could be found.

The diagnosis being established, the tunica was opened and search made for the parasite; but, notwithstanding the fact of a careful examination, no adult parasite, nor even a varicose lymphatic, could be found.

Patient made a rapid recovery, but now complains of pain in the right testicle and cord. The testicle is somewhat swollen and tender, but no effusion can be detected in the tunica.

This case establishes the fact that the filaria can exist in this climate, and as we have still water, mosquitoes and the negro race, all favorable to the propagation of the filaria, it is a subject that should prove of interest to us. Traveling in high altitudes diminishes the number of embryos in the blood. It is claimed by some investigators that one pair of adult filariæ may give birth to all the embryos found in the blood and that the embryos live only one day. The blood examined by Dr. McShane contained at least five embryos to each drop of blood, making a probable total of 340,000 in the blood of this man. It seems improbable that this large number could be produced daily by a single adult for a number of years; one case having been reported (Manson) of a man whose blood contained the embryo filaria during a period of thirty-two years.

Dr. Parham had examined the case before operation, and on palpation it felt like a flabby, fatty tumor spread over the testicle.

Dr. McShane mentioned a similar case seen at the hospital one year ago. A portion of the fluid was drawn off with a hypodermic syringe, by Dr. Miles, and, within twenty-four hours after the puncture was made, all of the fluid had been absorbed.

The fluid was examined microscopically, and its appearance was the same as in the case reported by Dr. Matas, though no embryos of the filaria were found.

At the close of the discussion Dr. McShane demonstrated with the microscope slides showing embryos filaria in the blood and also in the chylous fluid from the hydrocele.

M. J. MAGRUDER, M. D., *Secretary.*

OCTOBER 27, 1800.

Dr. F. Formento in the chair.

Dr. H. J. Scherck read a paper on

Cæsarian Section as Practised in Germany.

Mr. President and Gentlemen: Cæsarian section, no longer the dreaded operation attempted only in "Articulo Mortis," is

to-day one of the regular obstetric operations practised with good results with regard to the life of both mother and child.

Begun as it was in 1500 A. D. by a certain Jacques Nufer, a swine herdsman, on his own wife, which, remarkable to relate, was followed by success, it has successively traveled down to our modern times until it stands to-day as one of the recognized operations of modern surgery.

The first treatise written on the subject was by Rousset. Since then work upon work has been written, far too many to recount.

Why have the German obstetricians, viz., Säger, Leopold and Reike, been so successful in late years? The answer is without doubt to be found in the following:

1. The strict attention paid to antiseptis and asepsis.
2. The method of Säger for suturing the uterus.
3. Timely operation.
4. The removal of the uterus from the abdominal cavity before the incision.

Schroeder, in 1874 gave the following statistics:

	Cases.	Recoveries.	Deaths.	Percentage.
England.....	480	236	244	50
Germany.....	712	332	380	53
France.....	344	153	191	55
Belgium.....	11	4	7	63
Italy.....	46	5	41	87
America.....	29	8	21	33
Total.....	1622	738	884	54

Let us now glance on the cases operated on by Cr  d   before thorough antiseptis was in vogue—but still a great improvement on the statistics of Schroeder.

Cr  d  , in twenty-six cases, gives—

Recovery of mother.....	76	per cent.
Death of mother.....	24	per cent.
Children born alive.....	88.4	per cent.
Children born dead.....	11.6	per cent.

In three of the fatal cases, septic infection existed before labor.

Of Professor Leopold's ten cases operated on before 1887,

9 maternal recoveries.....	90	per cent.
1 maternal death.....	10	per cent.

And *all* children born alive.

Of six cases of Säger up to 1887, there was no death either of mother or child.

In all Europe prior to 1887, *i. e.*, before thorough antiseptis and asepsis, the mean death rate may be placed at 54 per cent. and that of cephalotripsy at 41.79 per cent.

In the year 1887 Leopold performed five C  sarian sections, no maternal deaths. In 1888, eight cases, of these he lost two—one from peritonitis and the other from shock; in

this case the pelvis measured only six centimetres, and craniotomy had already been tried. During the year 1889 eight cases were operated on, with one death, due to hemorrhage in the abdominal cavity. In all Leopold has made forty-one Cæsarian sections.

Of the conservative cases, he has performed the operation twenty-five times, on account of great pelvic deformity, with two deaths in all, a mortality of 8 per cent.

When performed on account of what he terms relative indications, when there was a choice between Cæsarian section and craniotomy, he has has a mortality of 9 per cent. out of twenty-two cases.

In cases where the question is to decide between craniotomy and cæsarian section, Leopold believes the mother's wish should be consulted, as there is no doubt that craniotomy is less fatal to the mother than cæsarian section.

In all cases it is well to wait until the beginning of the uterine contractions before beginning the operation.

Can one look at these figures and not at once see the progress that has been made and guess the cause?

Asepsis, in cases of cæsarian section, is carried out in the same manner as in ordinary cases of laparotomies; the abdomen of the patient being washed with soap, warm water and brush, with 1 to 1000 sublimate solution, and finally with sulphuric ether, the hands of the operator carefully disinfected, and the clothing of the patient carefully washed as well as all towels, sheets, etc.

I shall not go more deeply into the description of the anti-septic measures used, as they are identical with all other abdominal operations and differ only slightly among the operators of Germany.

The technique of the operation I will explain in as few words as possible.

In Dresden, where I had the good fortune to witness a few of these operations, chloroform was invariably used; in fact, there and in Martin's clinic I never saw ether employed, and think that it is far safer, as we do away with, in a measure, the annoying vomiting so often found after the administration of ether, which in abdominal operations is so dangerous.

In all his abdominal sections Prof. Leopold places his patients on a table which is capable of being converted into a double incline plane by simply having a board with hinges about two feet from the end, under which are supports to keep it elevated. The patients are not, however, raised to this position until they are fully under the influence of the anæsthetic.

The knees of the patient are bent over the incline and a

strap passed around them, holding the patient in an immovable position; the advantages claimed for this position are:

1. The patient having the head and trunk slanting downward causes the intestines to gravitate, leaving the lower abdominal cavity and pelvic cavity perfectly empty, thereby avoiding the great annoyance of holding back the intestines with towels, and giving the operator a clean field to work in. I have never seen the intestines protrude where this style of table was used. The pressure of the atmosphere in the vagina causes the uterus and its appendages to fall much lower in the cavity, thereby allowing the operator to grasp the ovaries or tumor with much greater facility.

2. The patient, with her head lowered, remains under the effect of chloroform by the dependent position of the head.

3. It gives students and visitors a much better opportunity to witness the operation, as the field of operation can be seen by all.

With the patient in this position an incision is made beginning a little below the ensiform cartilage and extending nearly to the pelvic bones invariably in the median line, hemorrhage being controlled by the use of small clamps.

The uterus is then exposed and turned out of the cavity. Before making the incision into the uterus one of the assistants grasps the cervical portion of the uterus firmly, so as to prevent hemorrhage; there are operators who do not do this, however, but adopt the suggestion of Säger and pass a rubber tube around the cervical portion, but from those cases that I have seen the grasping of the uterus with the hand is sufficient to control all hemorrhage.

The turning of the uterus out of the abdominal cavity is also a great improvement over the old way of incising it while in the cavity, as it prevents any of the fluids from the inside of the uterus from entering the abdominal cavity, and particularly so as the abdominal walls are brought together before the incision by means of clamps, thereby giving little chance for infecting the cavity during the operation.

The incision in the uterus is made in the median line about six inches in length, beginning a little below the top of that organ; the membrane is incised and the child removed as quickly as possible by taking hold of any part that may be most convenient and given to one of the attendants, who has already everything in readiness for the resuscitation of the child.

While the child is being withdrawn from the uterus, the assistant firmly compresses the cervical portion of the uterus, and a hypodermic of ergot is given. The placenta is then removed and the uterine cavity cleansed with antiseptic sponges

and carbolized water; after this the uterus is sutured, adopting Säger's method, but not as he at one time advocated, viz: of removing a strip of tissue so as to allow the edges of the uterus to be inverted; this has been found to be unnecessary.

The sutures, which by the way are always sterilized silk, are passed through the serous and muscular layer, but not through the decidua. They are passed in at intervals of about one-half to three-quarters of an inch apart, and between these superficial silk ones. Silk is far better than either catgut or silver, as catgut is absorbed too quickly, and the silver is liable to injure the intestines.

The uterus is then most carefully made aseptic, the abdominal cavity reopened, and the uterus replaced. Hemorrhage very rarely takes place, as contractions have begun and the effect of the ergot manifests itself. I will not describe Porro's operation, except to say that should that be adopted instead of Säger's, that it would not be necessary to reopen the cavity of the abdomen, but simply introduce long needles through the uterus as it emerges from the cavity, pass a tube (rubber) around same and remove the bulk of the organ (sometimes the stump is cauterized with Pacquelin's cautery). The removal of the ovaries accomplishes all that can be desired as regards future pregnancies, and is to be preferred to Porro's operation.

The abdominal incision is closed by means of deep and superficial silk sutures and an antiseptic dressing applied. The patient is then removed to the ward and kept quiet. Opium is seldom if ever used in the after treatment, but gentle nourishment begun from the start. The dressings are not removed for a week or more, unless indicated by fever, pain, etc.

In these few remarks I have endeavored to bring before you the present method concerning this operation as practised in Germany.

Discussion.

Dr. F. Formento, who had been appointed to open the discussion, said, since the introduction of antiseptics this operation had been performed much more frequently and was attended with far better results than in former times.

In Paris the operation had been abandoned for several years, because the cases invariably terminated fatally, while in the country provinces of France only a very small per cent. of the cases recovered.

Until recently this operation was only when patients were in *articulo mortis*, and this fact in a great measure accounts for the high death rate in former years.

In 1852 Dr. Pollier, of Kentucky, first used the silver suture

to close the uterine wound. If the pelvis measures not more than five centimetres it is better to at once perform cæsarian section than to attempt embryotomy.

The danger is greatly diminished in women who have once undergone this operation. This is probably due to the fact that the first operation caused adhesion of the peritoneum.

One hundred and nineteen Cæsarian sections were made on forty-eight women, with only eight maternal deaths. One patient was operated on four times.

Prior to the use of antiseptics the mortality was much greater in cities than in the country. In large cities the death rate was 62 per cent., in small towns 34 per cent. and in the country 33 per cent.; now, with antiseptic precautions it is about the same in cities as in the country.

Dr. H. W. Blanc thought the small death rate in women who were operated on more than once was due not only to the adhesions caused by the first operations, but also to the fact that such women generally go to large hospitals and place themselves in good hands, so that the operation can be done under the most favorable circumstances.

Dr. J. G. Friedrichs thought the reason the death rate was smaller in the country was because the women are in better health. He referred to a case in which Dr. Samuel Chopin successfully performed Cæsarian section, with a common pocket knife, on a woman living in the country, while nearly all of his cases operated on, under the most favorable circumstances in the city, terminated fatally.

Dr. M. J. Magruder called attention to two points in Dr. Schreck's paper: 1. The position of the patient. 2. The removal of the uterus from the abdominal cavity before opening the organ. These two precautions should be carefully observed where it was practicable to do so.

Dr. H. W. Blanc said he wished to direct the attention of the society to a form of fever that has prevailed throughout the South during the past summer. He had observed a steady decrease in the number of deaths from malarial fevers occurring in this city from 1886 to 1890.

Table showing number of deaths from 1886 to October 27, 1890: 1886, 345; 1887, 297; 1888, 265; 1889, 245; 1890, 303.

The foregoing table shows an increase in the number of deaths this year attributed to malarial forms, notwithstanding the good sanitary condition of the city.

The fever has been diagnosed typho-malarial, gastro-hepatic, non-malarial, remittent, etc. The speaker was inclined to adopt the term entero-malarial, applied by Dr. Kinyoun of the Marine Hospital Service, an experienced and authoritative

bacteriologist. The name typho-malarial is apt to be confusing on account of the prefix, *typho*, being understood by many as implying a condition resembling typhoid fever, and not the coexistence of two fevers. He thought the term entero-malarial would better express the idea if the disease is considered to be due to two specific poisons, namely, that of malaria (the plasmodium malariae) and the bacillus typhosus of Eberth.

Dr. Kinyoun has described two groups of cases: (1) Those in which symptoms of malaria predominate, masking the enteric lesions; (2) cases in which the enteric symptoms are most prominent.

He has found that when malarial fever symptoms predominate the plasmodia are in great abundance, being found, not only in the blood corpuscles, but in the serum; on the other hand, when the typhoid symptoms are most marked it is easier to isolate the bacillus of Eberth; while the plasmodia malariae, although still present, were in smaller numbers and confined within the blood corpuscles.

These conditions have been found to obtain in the same person at different stages of this disease.

The fact that two specific diseases can exist in the same person at one time would seem to be thus demonstrated and disprove Hunter's axiom.

Dr. Blanc has a patient suffering with secondary syphilis and leprosy at the same time.

From what has been said it would seem that two specific diseases could exist in the same patient and alternate in intensity.

The symptoms of this fever have been admirably described in a paper by Dr. Legare, of Charleston, S. C., read before the American Medical Association.

Dr. Legare divides this fever into three varieties:

1. Regular remittent, assuming a continued form.
2. A continued fever from the commencement.
3. Cases in which most of the symptoms are referable to the nervous system.

This division, however, can only be made during the first few days, as the varieties generally become blended so that by the end of the first week it is often impossible to determine to which variety the case belongs.

The first variety is usually ushered in by a well marked chill, followed by a remittent fever of the tertian type. The remission seldom continues after the first day. Edge of tongue usually presents a reddish hue, while the center is an ashy color without papillae.

The second variety usually comes on in the evening, with slight coldness along the back, headache, pain in the back and

extremities, warmth of skin and disturbance of circulation. On the tongue will be found large red papillæ. These symptoms are generally preceded for about a week by slight headache, pain in the loins and lower extremities, and a feeling of lassitude.

In the third variety the patient complains of headache, pains in almost every part of the body, lassitude, loss of appetite, disturbed sleep and lack of ability to perform either mental or physical labor for two or three weeks before taking to bed. After this time we are likely to have nausea, vomiting, increased headache, congestion of the brain, delirium, enlargement of the liver and spleen, and hemorrhage from the nose and gums. Dr. Blanc then referred to the fever that has prevailed in Pearlington, a town of about 1400 inhabitants, situated on Pearl river, near the gulf coast.

He was told by Dr. Mead, the physician of the place, and a careful observer, that there had been, in all, about twenty cases, with two deaths. The first case occurred last spring in a house located on a low piece of ground, so that it was necessary to build a small levee on the front and side of the lot to keep off drainage from other places, and in doing this an excavation was made, leaving a pond of stagnant water twenty-five feet from the house. The water used by this family was obtained from an underground cistern only six feet deep and within a few feet of the kitchen.

The second case occurred in a young man who was a daily visitor at this house. He was removed to his father's house, four miles from the town, and four other members of his family contracted the fever, two of whom died—one on the seventeenth and the other on the thirteenth day, from intestinal hemorrhage.

Three of these cases were seen by the speaker, and the symptoms were, gradual rise of temperature, usually reaching 105 deg., rapid pulse, diarrhœa, tenderness and gurgling in iliac region, tympanitis, and, in some of the cases, delirium.

Dr. B. thought the two deaths were caused by unmistakable typhoid fever.

Dr. E. D. Beach thought these fevers were more or less enteric, and usually caused by drinking water. He gives but little quinine; pays particular attention to the bowels. Gives large enemas of warm water, made alkaline, twice every day, whether there was diarrhœa or constipation.

Dr. R. J. Mainegra said he had seen a number of these cases during the summer, and spoke particularly of two cases he had treated at Camp Parapet, just above the city.

In the commencement both cases were distinctly inter-

mittent, but within four or five days the fever had taken on a continued form, notwithstanding the fact that both patients were thoroughly cinchonized.

The hygienic surroundings were bad, and in one case the drinking water was obtained from an old rotten cistern. The fever continued about five weeks, with high temperature not infrequently reaching 104 deg. or 105 deg., rapid pulse, gurgling in right iliac region, tympanitis and diarrhœa very profuse in one case, and in the other intestinal hemorrhage. Quinine had no effect on the duration of the fever, but large doses were given for antipyretic effect and to sustain the patients. Acetanilid was administered freely, when temperature was excessive, with good results.

Dr. Magruder said he thought malaria had very little to do with most of these cases.

He had treated three children, in one house, suffering from this fever.

The first case occurred about ten days after the death of a young man in the house, said to have died of typho-malarial fever after a sickness of five weeks. The symptoms in these cases were: gradual rise of temperature, rapid pulse, sleeplessness, coated tongue, tenderness and gurgling in right iliac region, and constipation; the latter symptoms being so marked as to require constant attention. Pain in abdomen was complained of if bowels were not moved every second day. Quinine and arsenic were given in large doses without the slightest effect. The only other treatment in first two cases was expectant.

In the last case salol was given, and at the end of three days the temperature was 99½ deg., when it was discontinued and the use of quinine resumed. At the end of twenty-four hours the temperature had again risen to 103 deg.; quinine was then abandoned and salol used throughout the remainder of the case. The temperature soon fell to 99 deg., and did not again exceed 100 deg. The duration of fever in this case was twenty-three days, while in the two other cases it was five weeks.

Dr. Formento said the term typho-malaria had been applied to this fever by southerners believing it to be a combination of typhoid and malarial fevers. The fact that quinine has no effect would seem to indicate that it is not purely malarial. The administration of tonics and sustaining measures seems to be the treatment indicated in these cases.

Dr. A. C. Smith did not think the action of quinine in these fevers was proof that they were not malarial. He had

seen clear-cut cases of malarial fever in which quinine was given without effect.

M. J. MAGRUDER, M. D., *Secretary.*

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Third Annual Meeting, Held in Atlanta, Georgia, November 11, 12 and 13, 1890.

FIRST DAY, MORNING SESSION.

The association convened in Concordia Hall, and was called to order by the president, Dr. George J. Engelmann, of St. Louis, Mo., at 9:30 a. m.

Mayor Glenn delivered an address of welcome, the response to which was made by Dr. R. B. Maury, of Memphis, Tenn.

Dr. R. B. Maury, of Memphis, then contributed a paper entitled

How shall we Treat our Cases of Pelvic Inflammation?

The paper gave a comprehensive resumé of the pathology of chronic pelvic inflammation as it has been clearly demonstrated by Bernutz, by Polk, Coe and others, and by the results of abdominal section. This pathology is that of pelvic peritonitis dependent upon tubal disease—not cellulitis. The author declared the term chronic cellulitis a misnomer—a pathological condition which existed only in the imagination of the physician, a term which had been productive of pernicious results in practice, and which should no longer be used in connection with non-obstetric pelvic inflammation.

When the pathology rests upon such positive and abundant evidence, the question might be asked, why reopen a discussion upon it now? Because it is evident from our society proceedings and hospital reports that great confusion exists in the medical mind to day in regard to it. Dr. Byrnes' case, discussed in the New York Obstetrical Society during the present year, was taken as an illustration. In speaking of such cases the great tendency to relapses in chronic pelvic inflammation was illustrated by two cases in which pus tubes were found five and seven years after attacks of peritonitis, and when it was supposed the patients were entirely restored to health. Upon the subject of treatment the writer admitted that by non-surgical therapeutic measures large intra-peritoneal exudations are often absorbed and even some tubal and ovarian inflammations entirely

disappear and recovery seems complete. But this is the exception and by no means the rule. For the radical cure of chronic pelvic inflammation non-surgical treatment fails in a majority of the cases. A great many women, suffering to a moderate degree, continue to do so in spite of the best directed non-surgical measures, and perhaps wisely elect not to undergo operation.

As a rule, the only radical and permanent relief is afforded by removal of the diseased appendages. The treatment of pus collections of course requires abdominal section.

Dr. Joseph Price, of Philadelphia, followed with a paper on

The Motive and Method of Pelvic Surgery,

in which he said pelvic surgery must be considered apart from abdominal surgery. It is distinct from it, both in the nature of the lesions dealt with, in the difficulties it presents, and in the complications and embarrassments to routine technique.

Nowhere as much as in pelvic surgery does the distinction between the general surgeon and the specialist in pelvic disease stand out so clearly. Pelvic adhesions in appendicitis, for instance, Mr. Treves would deal with by the knife. If this is feasible, why not put the knife to ovarian and tubal abscess, to all intestinal fixation by inflammatory processes and the like? The very suggestion of such method to the mind of the specialist accustomed to deal with all the complexities of pelvic surgery is fraught with evil, and this mere suggestion only makes it clear that general surgeons, in so far as they are entirely wedded to the knife in removing disease, fall short of the demonstrated harmfulness of its application in pelvic work.

Relative to electricity, Dr. Price said that the electricians yet talk learnedly of the undetermined place of electricity in the treatment of ovarian cysts, but tar water and tractors have gone to their long rest. The time must yet come when the claims made for electricity as a universal panacea must be exploded, and its real, limited, and narrow horizon of usefulness be well defined. The pernicious effect of so-called cures of reported complicated cases, adhesions, inflammations, and the like by men without training, who look only at the amperemeter while they adjust a clay pad or introduce a galvanic sound, is not to be over-estimated. He had repeatedly shown by exhibited specimens the fallacy of the claim of exact diagnosis made by these men, and the arguments are irrefutable. He believed that the only position assumed by the electricians that has the slightest foundation in fact, is that electricity will sometimes control hemorrhages and relieve pain. That it cures either is not proven.

In dealing with adhesions the first point to be sought after is to find a crease or crevice into which some progress can be made. In separating intestinal adhesions they should be broken as far from the bowel as possible. The farther away the less liable will they be to bleed, and the absence of hemorrhage is a great comfort in these cases. The strings of adhesions may be dealt with according to their size, it sometimes being best to remove them, at others there is no necessity for this. In all doubtful cases their removal is the better surgery. All bowel adhesions should be carefully examined after their separation. By so doing fecal fistulæ will often be avoided by the careful placing of an intestinal suture. It hence is apparent that no pelvic surgery should be attempted until the operator is competent to deal with intestinal wounds, even to resection and anastomosis. Once the adherent mass is removed, the ligature should be applied close up to the cornu uteri. The ligature should not be so heavy as to resist knotting, nor so light as to break easily. The ordinary surgical knot is the safest of all knots with which to tie the pedicle. It constricts more evenly and certainly, and will slip less readily. The leaving of sufficient button is of the greatest importance, to prevent slipping of the ligature.

In the treatment of extra-uterine pregnancy his urgent advice is, to operate without delay when the symptoms point to the disease, with the assurance that delay will only complicate matters and sacrifice the life of the mother.

The field of pelvic surgery, said Dr. Price, is not one of experiment or palliation; that it strives in all cases to remove the offending body in order to conserve the rest of the economy; that its tenets are founded on philosophy and fact, not fiction, and that its worth lies in its proven results. The surgery that plucks out the eye, or casts aside the limb to save the eye, or the limb, or the life, is greater, better and wiser than a sentiment that preserves a shell to inclose a ruin.

FIRST DAY—AFTERNOON SESSION.

Dr W. H. H. Cobb, of Goldsboro, N. C., read a paper on
Supra-Pubic Cystotomy in a Case of Enlarged Prostate.

The patient, a farmer, married, aged 49 years, rheumatic diathesis, dated his troubles back to 1881. While attending to the duties of Register of Deeds, he carelessly allowed overdistention of his bladder, and had suffered more or less since that time. In 1882 he had an attack of nephritic colic and passed a small calculus, similar in size and shape to a grain of wheat. On three different occasions he passed dark, gritty deposits.

In 1883 he suffered much inconvenience and some pains in urinating. In 1887 he passed a dark, gristly, bloody substance about the size of a corn-pea, accompanied by much pain and bloody urine. For the past three years he has suffered much with cystitis in a very aggravated form, with great pain and difficulty in defecation, urine containing much blood, pus and mucus. The patient's efforts to relieve his bladder and bowels were tormenting, and night after night was spent in walking over his premises with groanings so severe as to disturb his neighbors. The patient consulted Dr. Cobb June 15 last, and from the history of the case he suspected vesical calculus, but failed upon examination with sound to detect any stone. A digital examination, however, per rectum disclosed the right lobe of prostate greatly enlarged, rough, indurated, exceedingly tender and sensitive. After consultation by letter with Hunter McGuire, he decided upon supra-pubic cystotomy as the only hope of permanent relief, which was done after the method of Dr. McGuire on June 23. At the expiration of two months (August 23), he found the prostate perfectly normal, with no symptoms of cystitis, and withdrew the plug, allowing the fistula to unite, which it did in about ten days. His patient performs the act of urination and defecation without the slightest trouble, and expresses himself as entirely relieved, and is at present following his usual vocation.

Inflammation in and about the Head of the Colon.

Dr. L. S. McMurtry, of Louisville, read a paper on this subject. He said the teachings to be found in systematic treatises on surgery and practical medicine upon inflammation and its results in and about the caput coli are not only worthless, but positively misleading. This is true, not only as to pathology and treatment, but even as to the anatomy and relations of the cæcum and its appendix.

It is well known that inflammatory changes in the vermiform appendix are in almost every case the origin and seat of the inflammatory diseases about the caput coli. Inflammation of the cæcum is very rare, yet the testimony of surgeons and pathologists is abundant that in a certain proportion of cases cæcitis, with perforation, occurs without involvement of the appendix. Regnier, in 1886, operated in a case presenting symptoms of intestinal obstruction with peritonitis, doing an abdominal section. At the autopsy cæcitis with perforation was discovered. In 1888, the speaker operated in case of perforative cæcitis and sutured two perforations in the cæcum. His patient recovered, and was present in the surgical section of the American Medical Association in May of that year.

Fecal impaction has been mentioned by surgical writers as a cause of inflammation about the head of the colon. Pain over the cæcum, with a fecal mass perceptible on pressure, often occurs, but rarely, if ever, associated with peritonitis. A few weeks since Dr. McMurtry saw a case, in conjunction with Dr. H. H. Grant, of Louisville, in which a localized peritonitis existed, in the right iliac fossa, with a well defined, firm tumor. Abdominal section was done, and, instead of appendicitis, they found the disease to be cancer of the caput coli. Irrigation and drainage rescued the patient from the immediate danger begotten by active peritonitis. The patient was a woman of middle age, and the engrafted peritonitis presented the symptoms of an acute condition. Malignant disease of the cæcum has not, so far as the writer is aware, been mentioned by writers upon this subject as a probable condition in the diagnosis of deep-seated inflammation of the right iliac fossa.

The decision to operate should be determined more by the grade of the inflammation than by the time it has existed. When a diagnosis has been made, and three days have elapsed without subsidence of pulse and temperature, operation should be done.

Dr. McMurtry submitted the following conclusions:

1. Inflammation about the caput coli is, as a rule, inflammation of the appendix.

2. A certain proportion of cases will recover spontaneously by resolution. With these recurrence of the disease is common.

3. In the larger proportion the disease will endanger life, and may at any moment assume a condition practically hopeless.

4. Early operative interference involves less danger than delay, and should be resorted to in all cases in which a high grade of inflammation is persistent.

5. The essentials of the operative technique are brief anæsthesia, quick and thorough work, removal of the appendix, irrigation, and drainage. The lateral incision is preferable to the median.

FIRST DAY—EVENING SESSION.

President Engelmann delivered an address entitled

The Causes of Ill Health in American Girls, and the Importance of Female Hygiene.

He showed that the health of the American girl is threatened and impaired by causes more or less avoidable, as they are due to our methods of life, our methods of training and

education; that the physique of this girl, most favorably situated amid auspicious possibilities, is imperfect; her brain overworked, her nerve power exhausted, her function impaired, and reproduction endangered, all by reason of the susceptibility of her peculiar organization, and the increased impressionability of the sensitive system during the years of development, in which it is subjected to the most severe strain.

The remedy is attention to woman's peculiar organization and the cyclical waves of her dominant function; or, in other words, harmonious development and occupation of nerve and muscle; diminished brain work and nerve stimulation with increased and coördinate physical exercise; increased protection and diminished compression of dress; self-knowledge and individual care during periods of heightened susceptibility. Changes are necessary in custom and fashion, in methods of labor and education. A harmonious co-education of mind and body should be approximated with coincident maintenance of proper hygienic conditions.

Dr. Engelmann closed with a plea for the self-care of the American girl and her proper physiological instruction by the mother, which alone will mitigate or remove the initial cause of many of her ailments. Upon the mother he would impress that the perfect development of the female function, and the maintenance of this function, once developed, in a healthy condition, is essential to the perfect development of the girl and the perfect health of the woman; that self-care, a well regulated female hygiene, is the foundation of her well-being.

SECOND DAY—MORNING SESSION.

Dr. C. A. L. Reed, of Cincinnati, Ohio, read a paper entitled

Indications for Operation in Ectopic Gestation.

The paper starts out with the assumption that the only proper treatment of ectopic gestation is by laparotomy, or, more properly cœliotomy. While the profession has become practically unanimous that this is the proper line of treatment, the indications for operation have been less definitely decided upon. This conviction is forced upon the observer, not only by a study of the literature of the subject, but by encountering cases which have been advised against operation by their attending physicians, until hemorrhage within the pelvis has threatened a fatality, which is but too frequently realized. The most legitimate excuse for this dilatory practice is to be found in the confusion which has arisen with regard to the supposed uniform causal relationship of ruptured ectopic gestation to

pelvic hæmatocele, and the division of the latter into "primary" and "secondary" rupture. These terms are unfortunate, and, as used in this connection, may be entirely arbitrary. Primary rupture is made to mean rupture beneath the peritoneum, instead of *first* rupture, as the etymology of the word would imply, while *secondary* rupture is made to mean rupture within the peritoneum, instead of "second" rupture. Whereas, an intra-peritoneal rupture may be, and frequently is, a primary rupture, when spoken of with reference to the sequence of events in ectopic gestation. There would be no serious confusion even here if we were not also taught to leave extra-peritoneal hæmatocèles alone to be taken care of by absorption, and if we did not add that, as these hæmatocèles are generally caused by ruptured ectopic gestation sacs, we are to relegate these cases also to the expectant plan of treatment. This conclusion is without warrant and is responsible for hundreds of deaths annually from this one cause.

The treatment of ectopic gestation premises the diagnosis of this condition. This is obviously difficult, and in the majority of instances can not be arrived at at all, or, if at all, only presumptively; but in all these cases conditions can be found in the pelvis, which if not conclusive of extra-uterine pregnancy, yet constitute conclusive indications for exploratory operation. The presumption of ectopic pregnancy can be arrived at before rupture, chiefly by a history of previous sterility, by a previous amenorrhœa, followed after a few weeks by irregular hemorrhage, by increased tumefaction to either side or back of the uterus, and by the existence of false decidua within the uterus. The latter fact may be safely determined by the judicious use of the Emmet curette forceps. The diagnosis after rupture is essentially the diagnosis of internal hemorrhage. Time wasted either to determine the cause of that hemorrhage, or to find out if it be primary or secondary, is criminal. The thing to do is to cut down and operate. The position has been taken that time should be taken for the patient to rally from the shock. One of Dr. Reed's own cases died simply because he waited twelve hours for reaction—a lesson which taught him the fallacy of the old teaching, and which has since saved lives at his hands. The best way to overcome shock from internal hemorrhage is to stimulate the patient by giving ether, stop the drain by ligating the bleeding vessels and rouse the nervous system by washing out the belly with hot water.

Dr. Reed's conclusions are:

1. The only proper treatment of ectopic gestation is that by abdominal section.

2. The operation should be done in cases before rupture so soon as the condition can be presumptively diagnosed.

3. The operation should be done in cases after rupture so soon as the evidences of internal hemorrhage become apparent.

4. In cases in which the period of viability has already been reached without rupture, pregnancy should be allowed to advance to term before operation, but only under the closest possible vigilance.

5. In all cases the appendages from both sides should be removed, providing the condition of the patient will justify the extension of the operation.

Dr. Bedford Brown, of Alexandria, Virginia, followed with a paper entitled

The Local and General Treatment of Gangrenous Wounds and Diseases.

Many years ago, previous to the late war, Dr. Brown determined to institute a series of experiments to ascertain the capability of local and general treatment of all gangrenous wounds and diseases that came under his care either for their prevention or arrest. The object was to find local agents possessing active properties as stimulants of vital action in the affected parts, also as means of disinfecting and deodorizing gangrenous sloughs, hastening their final separation and for the establishment of a healthy basis for granulation. In cases coming under his care he found that the old deodorizer failed to accomplish these objects. He then employed a solution (almost saturated) of sulphate of zinc and dilute sulphuric acid as a local application, which seemed to meet all the requirements. The first case in which it was applied was according to the following formula:

R	Zinci sulphatis	5j.
	Aquæ	℥j.
	Acidi sulph. dil.	5ss.

After the free application of hot water at 110 the solution was applied every three hours on bats of raw cotton. In the course of two days the sloughs separated rapidly, leaving a perfectly clean, healthy basis for granulation. This solution evidently possesses active antiseptic properties. It is an admirable deodorizer; it is clean and cleanses the parts effectually. In cases of great loss of sensation in the parts, weak circulation, reduction of vital action, and depressed vitality, he knows of no agents better calculated to arouse nervous action and stagnant circulation, for as soon as the living basement is exposed it gives rise to intolerable pain. He has used this solution

in all forms of gangrenous wounds and diseases, some limited, others extensive and associated with septicæmia, with benefit.

Dr. Brown cited the history of several cases of different varieties of gangrenous wounds and diseases treated by various methods.

Dr. Henry F. Campbell, of Augusta, Georgia, spoke on vesico-vaginal fistulæ.

Dr. W. L. Robinson, of Danville, Va., read a paper on

The Treatment of General Septic Peritonitis,

in which he called attention to those cases which, attended by absence of pain and a seemingly improved condition after chill and fever, mislead as to the necessity of operating, and instanced two cases of recent date seen in consultation in which septic peritonitis and secondary abscess existed in spite of the seemingly favorable condition of the patient. He says that often there is an utter disproportion between the pathological condition and the amount of pain and tenderness, a condition so often seen in puerperal peritonitis.

He states that traumatic abdominal injuries, appendicitis and pelvic inflammations are the chief causes of septic peritonitis, while of course any internal or external influences which produce suppuration may be the indirect cause.

He agrees with Dr. G. Frank Lydston, of Chicago, that in children, falls, blows, etc., are the causes generally of peritonitis, and that because of the age of children, in directing attention to the seat of injury, we often diagnose the disease too late. Dr. Robinson takes the stand that gonorrhœa is a frequent cause of septic peritonitis, and the reason why it did not always produce it was, that it did not invariably invade the uterus, and even when it entered the tubes, the adhesions to the ovary rendered it self-limiting.

He holds that section, irrigation and drainage is the treatment, and that where adhesions are extensive that salines should follow the operation in order that peristaltic action of the bowel would prevent reformation. Cases occur which, when seen by the surgeon, are too prostrated to undergo a complete operation and the proper plan is to rapidly do what one can by section, irrigation and drainage. Dr. Robinson instanced a case of recent date in which the patient was saved when seen only *in extremis*. He urges the surgeon to go prepared to resect, anastomose, etc., as complications may indicate. Where conditions are diagnosed which will most likely terminate in septic peritonitis, such as recurring appendicitis, that preventive measures should be undertaken; and where great tympanites exists he would adopt Dr. Davis' mode of opening the bowel and flushing it out with hot water.

Dr. John D. S. Davis, of Birmingham, Alabama, contributed a paper entitled

The Clinical History of the Episcystic Surgical Fistula, with Cases.

SECOND DAY—AFTERNOON SESSION.

Dr. W. O. Roberts, of Louisville, read a paper on
Removal of Stone From Female Bladder Through the Urethra, with Cases.

This paper was devoted simply to his individual experience in the extraction through the urethra of stone from the bladder of the female. The cases thus treated were six in number; the ages of the patients ranged from 15 to 56 years. Four were married, but two only had borne children. The stones were phosphatic in four cases, uric acid in one, and an incrustated fringed body in another. In one, a very hysterical patient, the stone had for its nucleus a piece of soft wood. In one the patient had a vesico-vaginal fistula, which had been closed by an operation some months prior to the occurrence of the symptoms of stone. In another the bladder had been opened by a surgeon in doing an ovariectomy upon the patient a year before the stone was discovered.

In four of the cases the stones were single, in one there were two, and in one nine. In this case the patient had passed at various times a number of small stones, from two to seven, at a given micturition. These stones varied in size from that of a grain of wheat to a grain of coffee. In two years she had collected 184 stones, a number not representing all she had passed.

The extraction was done in every case under chloroform, the patient being profoundly anæsthetized. The urethral dilatation was begun with forceps, and completed by means of the fingers, the little finger being first introduced, the ring finger next, and finally the index finger. The fingers were well oiled. In Case 1 the stone was found to be almost an inch and a half in diameter. In Case 2 the stone was found in the urethra, and proved to be a piece of soft wood heavily incrustated with urinary salts. In Case 3 the stone was spherical, and had a diameter of about one-half inch. In Case 4 the stone was ovoid, its long diameter being an inch, the shorter three-fourths of an inch. In Case 5 there were nine stones, the smallest measuring circumambientally two and two and one-fourth inches; weight eighty-four grains.

Dr. William Perrin Nicolson, of Atlanta, Ga., presented a paper entitled,

Wet Antiseptic Dressings in Injuries of the Hand.

After dwelling on the importance of the subject, both from the standpoint of the future earning capacity of the patient and the large amount of financial compensation demanded from corporations, he stated that for seven or eight years past he had looked after the surgery of several railroads and manufacturing establishments, and in that time had been called upon to treat more than three hundred hand injuries, representing all grades of injury, from slight contusion to complete destruction of the larger part of the hand. The especial point that was urged in the paper was the doctrine formulated by Verneuill—*never to use a scalpel in a hand injury*. The old teaching, that when a finger was crushed you should go far enough behind the injury to secure a sound flap and amputate, was pernicious in the extreme, and had cost thousands of fingers that would have been restored to usefulness. Only such parts as were actually destroyed and pulpified should be removed, and all the tissues to come away should be amputated with the scissors. Projecting pieces of bone could be removed with plyers until reduced to the level of the fleshy parts. In compound fractures the parts should be coapted as well as possible, and the line of separation be determined by nature, and under strict antiseptic dressings. Such a slough was harmless. Another point to which attention was forcibly called was the utilization of blood clot in filling up ragged injuries, and by its substitution the restoration of lost parts. When a finger was crushed off, the end should be trimmed with scissors, and the clot utilized in building up a tissue over the bone. In reference to dressings Dr. Nicolson said that he had tried almost all varieties, and had finally obtained the most satisfactory results from keeping the parts constantly bathed in a non-poisonous antiseptic solution.

In dealing with these wounds they were first cleansed as well as possible and then bathed in a sublimate solution. Over all wounds a piece of aseptic rubber tissue, or oiled silk, was placed, then iodoform and sublimate gauze, and finally over all a covering of rubber tissue, into which, at some convenient point, a small opening was made. The patient was then given a bottle of antiseptic solution, to be carried in his pocket if moving about, and instructed to pour, at frequent intervals, enough into this opening to saturate the dressings. He uses, almost exclusively, listerine, combined with a small amount of carbolic acid, in the proportion of half an ounce of the former, and a half drachm of the latter, in a six-ounce mixture. If there was much pain, a small amount of aqueous extract of opium was added. These dressings were not disturbed until

the third day, when they were removed, under strict antisepsis, to preserve the integrity of the blood clot. Wet dressings were substituted at the end of about a week by the ordinary antiseptic dressings, kept moist by external covering of rubber tissue. Should sloughing occur, it is kept wet for a longer time with the antiseptic. Under this treatment pain was reduced to the minimum. Suppuration never occurred, and the separation of sloughs was facilitated by the warm moisture.

Dr. J. T. Wilson,, of Sherman, Tex., read a paper on

Uterine Moles and Their Treatment.

In the few cases that had come under his observation, they had been more troublesome, and elicited more anxiety than most writers indicate they should, and the hemorrhages in some of the cases were alarming; then, too, there were some points noticed in his cases which he had failed to find described in text-books.

All authorities seem agreed upon the etiological and pathological view generally taken of it, that it is a blighted or altered conception; the ovum having perished, its covering or the placenta, if formed when this change takes place, become attached to and continue to receive nourishment through the uterine walls and remains or becomes an organized product until it is thrown off; and this condition is attributed by some to the vitality retained in the villi of the chorion.

He had never met with a case that was lying loose in the uterus, but all were more or less adherent to its walls and most of them to the posterior wall. They had to be taken away piecemeal and the surface well curetted, washed out and carbolic acid or Churchill's iodine applied to the surface. They all require after treatment, because all except one case of hydatiform mole had endometritis, two had severe cervical lacerations and erosions; most of them had a greater flow than usual at the subsequent menstrual periods until the inflammatory condition was relieved; in two cases the general health, while not robust, was fairly good, the others more or less delicate, none of them in perfect health, none had any history of a cancerous cachexia, nor of syphilitic taint, one was tuberculous. His experience had taught him to believe that if these cases do not receive treatment at a proper time there are two grave dangers to be apprehended, viz: hemorrhage, which, if not an immediate cause of death, is capable of leading indirectly to that end, and septic poisoning.

In the treatment, if the cervix is sufficiently dilated and hemorrhage troublesome the mass should be promptly removed. If this can not be done, a hot, antiseptic vaginal douche should

be given, followed by a careful and efficient tampon, with the internal administration of ergot and anodynes if required, directing quiet, rest and a simple diet. In from twelve to sixteen hours the tampon should be removed and the foreign body extracted as completely as practicable; this will require a good stout pair of forceps. He had used the ordinary dressing forceps, and placental forceps, for the purpose. An excellent instrument in some cases is Emmett's curette forceps. The surface should be well curetted with a wire curette, the uterus thoroughly washed out with a hot solution of bichloride of mercury and Squibb's crude carbolic acid or Churchill's tincture of iodine well applied to the surface. If much bleeding ensues—and this is not usual, the application of persulphate or perchloride of iron gives good results. The patient is put to bed and kept there as long as the indication in each special case may require; she is put upon a tonic treatment and hot vaginal antiseptic washes. In from three to five days the uterus may need curetting again and another intra-uterine douche; then the application of iodine about twice a week, alternated occasionally perhaps with carbolic acid as long as may seem necessary, and the cure, if possible, completed of any uterine disease that may exist. The patient's general health is carefully looked after and her mind tranquillized,

THIRD DAY—MORNING SESSION.

Dr. G. Frank Lydston, of Chicago, read a very elaborate and lengthy paper entitled

A Review of the Treatment of Varicocele, with Cases.

He said, in discussing the various merits of operative procedures, it was unnecessary to take them up in detail. The *raison d'être* of many specially devised and named operations is apparent only to the operator. For practical purposes the various methods may be divided into (1) Acupressure; (2) subcutaneous deligation; (3) open deligation; (4) deligation with restriction of veins; (5) deligation with resection of scrotum; (6) resection of the scrotum.

The employment of acupressures was, to Dr. Lydston's mind, an evidence of a lack of faith in modern antisepsis. It reminded him of the Dutchman's method of cutting off his dog's tail, an inch at a time, so that it would not hurt him so much. Gradual obliteration of veins has all the dangers of immediate deligation in a marked degree, and none of its advantages. The term acupressure covered practically all methods of gradual obliteration of the veins of which Davat's operation is an illustration. Subcutaneous deligation is not essentially dangerous

in skilful hands. Simple as the operation appears, however, accidents have occurred. The operation is done in the dark and more tissue is included in the ligature than is necessary. Strangulation of tissue is not conducive of safety. Scrotal hæmatocele, phlebitis, septic infection, thrombosis and embolism are possible. The vas deferens has been included in the ligature. He does not condemn the subcutaneous operation in suitable cases, and in skilful hands, but he believes there are better and safer methods on the average.

There is little choice between deligation without disturbance of the veins and deligation with resection of the veins, excepting the remotely greater danger of sepsis in the latter. Gould's method of division by cautery he believes to be the most dangerous operation yet devised. The dangers of the open method are in a less degree those of subcutaneous deligation. If open ligation be determined upon the operation should be done as high up as possible in the straight portion of the veins and a single ligature applied to the vein. Deligation with resection of the scrotum he considers to be the ideal operation, in the majority of cases requiring surgical interference. His plan is as follows: An incision is made parallel with the spermatic cord just below the external ring. This incision should be about one inch in length. The cord is hooked out with aneurism needle, the veins separated and tied, the ligature is cut through and the cord dropped. Sutures and antiseptic dressing complete the operation. The scrotum is now amputated by the improved Henry operation. Dr. Lydston uses decalcified bone drainage tube and juniperized silk ligatures and sutures. Resection of the scrotum he considers the simplest and safest operation for varicoceles of moderate size. In the more marked forms the affection invariably recurs to a greater or less extent. He does not, therefore, consider the so-called Henry operation a radical cure in the true sense of the word. The author reported a large number of cases operated upon by various methods with the results, and, as far as could be learned, the subsequent history of the patient. The author had noticed hydrocele as a result of subcutaneous deligation in two cases, one operated upon by himself, and the other by another surgeon. The doctor reported one very interesting case in which the scrotum was continually bathed in bloody perspiration, and in which the seminal ejaculations were heavily tinged with blood.

Dr. Willis F. Westmoreland, of Atlanta, followed with some impromptu remarks on

Morbid Reflex Neuroses.

Dr. Geo. A. Baxter, of Chattanooga, read a paper on

Silicate of Soda, some New Methods of use in Surgery,

in which he said the jacket of baked silicate of soda which he would present to the association possessed all the qualities to be found in the plaster, firmness and support, and weighs actually one pound and six ounces. It is neater in appearance and finish, can be perforated like leather for ventilation which plaster can not. It is even lighter than leather without its costly process of construction, and has the same advantage over the woven wire jacket with the additional advantage over both these latter and all others of this class, that it can be constructed by any surgeon at any time or in any place. Dr. Baxter suspends his patient and puts roughly a plaster jacket around her, and cuts this as soon as it has hardened enough to retain its shape, thereby lessening materially the time of suspension, the most trying ordeal with this or the plaster, and not without its dangers when long continued, binds the cut edges together where it had been cut down directly in front, with cords, and then places a core of paper in the center. This paper core is used for two reasons: (1) To lighten the cast and take as little plaster as possible, and (2) to dry it the more readily by heating the inside. This done, the plaster is poured around the core and inside the cast, which gives him a mould of the body in extension and counter-extension, exact in every respect. Around this is made the silicate jacket, after the manner of the plaster roller bandage, weaving one-half inch metal strips in the meshes of the bandage at a distance of four inches apart around the whole cast, an inside lining of a knit shirt having been first placed over the cast. The whole is then placed over a coal oil stove and allowed to dry out, which it does in from one-half to two hours or less, especially if the cast has been previously dried. This process of heating not only dries the silicate but bakes it as well and renders it impervious to the action of water or the perspiration and gives it sufficient strength to allow of it being perforated for ventilation. It is now cut from the mould with a straight incision down the center, two pieces of leather, to which button hooks or eyelets have been previously attached, sewed up and down the front on each side, then the whole can be laced up solid or loosened and taken off at will. The necessity of taking off a jacket or leaving it on during the whole course of treatment will, of course, depend upon the character of the disease or injury under treatment.

Dr. Edwin Ricketts, of Cincinnati, Ohio, contributed a paper entitled

Surgery of the Gall Bladder,

in which he said that to Langenbach was due the credit of totally

extirpating the gall bladder, and to J. Marion Sims we owed a debt of gratitude for establishing the operation of cholecystotomy.

Dr. Ricketts reported seven cases of gall stones.

Case 1, Mrs. ———, aged 38, married, consulted him in 1880 for a tumor in her right side, in the region of the gall bladder. Said she had passed by the bowel, following a severe attack of hepatic colic, a number of gall stones. She was emaciated and suffered from what she claimed was neuralgia of the stomach. She was slightly jaundiced and bowels constipated. Upon examination of the abdomen the tumor was well marked and nodulated, above which was the liver surface smooth. He made the diagnosis of gall stone, and urged an operation. The patient's physician, however, urged the expectant plan of treatment, which was accepted by the patient. She then went to the country, and in less than three months had an attack of hepatic colic, followed by peritonitis, dying inside of three days.

Case 3, Ellen ———, colored, aged 30, consulted him for a markedly distended gall bladder, which made its appearance after a hard day's work over the wash-tub. She had been sick for ten days with fever, temperature reaching 103, rapid pulse, clayish stools, with occasional attacks of hepatic colic, though not severe. He opened the gall bladder, turning out one pint of fluid, which consisted of bile, mucus and pus, stitching the gall bladder up against the peritoneum. After three days catarrhal plugs were washed out of the common duct through the abdominal incision, in which had been deposited a glass drainage tube. The fistulous tract is still open, discharging periodically, but with no bad results to the patient.

In Case 4, a diagnosis of cancer of the liver was made by the attending physician. The gall bladder was opened and the stone turned out weighed 128 grains, and the common duct was filled with catarrhal deposits.

Case 5. After incising the gall bladder there escaped first about one drachm of pus, after which Dr. Ricketts turned out 28 stones. A diagnosis of cancer of the liver in this case was made by the attending physicians.

Dr. Hunter P. Cooper, of Atlanta, Ga., reported a case of fracture of the femur due to fragility.

Dr. Geo. H. Noble, of Atlanta, followed with an illustrative paper on procidentia uteri.

THIRD DAY—AFTERNOON SESSION.

Dr. W. Hampton Caldwell, of Lexington, Kentucky, read a paper on

Rectal Medication.

in which he said that several years ago he was convinced of the utility and safety of rectal administration of medicine, and had ever since regarded it as a most important plan of treatment. Since we accept the theory of the local origin or manifestation of the majority of diseases, this idea of rectal administration of medicine was more readily accepted as scientific in its application than at any time heretofore. The rectal suppository, consisting of cocoa butter, incorporated with the various therapeutical agents affords the most efficient and pleasant mode of administration in our possession. Rectal suppositories satisfy all requirements as a local or constitutional remedy; they are neat, convenient, and in almost every instance preferred by the patient to the administration of the same drug by the mouth. In the administration of anodynes, it is certainly a superior method of administration to all others, as the sensitive stomach is no longer a barrier or excuse in the administration of even the most disagreeable medical agent, for we well know in many instances that this organ is either intolerant to opiates or the patient has an invincible objection to taking them; the impossibilities of the rectal administration being thrown off is one great advantage over all other methods of administration. The effects of rectal medication embrace a wide range of action, including anodyne, antiseptic, alterant and astringent. In severe pain they certainly afford the best and safest source by which our patient's suffering can be relieved, as the action upon the rectal surface of a diffusible anodyne is quite rapid, and produces an effect about as soon as when administered by the stomach. In all inflammatory or painful affections of the abdominal or pelvic organs, this plan of administration has succeeded better than all others with the author.

Dr. Thad. A. Reamy, of Cincinnati, Ohio, reported a case in which he removed a stone weighing 365 grains, by vaginal cystotomy, from the bladder of a child six years of age, with injury of the ureter. Operations done for closing the bladder were difficult, but ultimately successful. He exhibited the stone, and made some comments on the case.

He felt after the stone had been removed that it would have been better to have made supra-pubic cystotomy. Had he known the size of the stone, he would probably have done that operation. But in view of the fact that it was partly en-

cysted, that the bladder walls were much inflamed and thickened, also the fact that in the child the parietal peritoneum dips much lower down in front of the bladder than in the adult, it became a serious question whether this course would have been better than the one pursued.

It was not clear whether the ureter was damaged in the removal of the stone, or was exposed by the sloughing which occurred much later on. He was inclined to favor the former view; and that the discharge of urine into the tissues of the bladder wall, in the line of suture, was to no small degree responsible for some of the failures in closing the bladder. However, until the last operation the most critical examination failed to discover the ureter.

Though Parvin, Campbell and others had turned an exposed ureter into the bladder, the speaker was not aware that it had heretofore been done in a subject so young. The vagina being so small rendered the manipulation difficult in the extreme.

Dr. James A. Goggans, of Alexandria City, Alabama, read a paper on

The Surgical Treatment of Empyema.

He said during the last eighteen months he had treated six cases of empyema which developed in the wake of pneumonia, all of which had made perfect recoveries. These patients varied in age from three to thirty-five years.

Surgical treatment was the one which had been the most successfully employed. Spontaneous cures, he said, were rare—so rare that surgical interference was the rule. There were many methods of operating for the removal of pus from the pleural cavity, but they may be classified under two general headings: 1. The closed method, which consists in removing the pus by simple puncture with some kind of trocar or modern aspirator and allowing the puncture to heal at once. 2. The open method, which consists in making an incision more or less free with the introduction of some kind of drainage tubes to maintain the perfect evacuation of the fluid, and admit of medicated washings, and to promote free ingress and egress of air that has been passed through an antiseptic dressing. The surgical treatment, then, being an absolute necessity, we can not over-estimate the importance of making the diagnosis certain by resorting to exploratory puncture with the hypodermic syringe. We can assure the patient and friends that no evil results can come from this procedure, and that the prognosis positively depends upon this means of settling the diagnosis.

OFFICERS FOR 1891.

President, Dr. L. S. McMurtry, Louisville, Ky.

First Vice President, Dr. McF. Gaston, Atlanta, Ga.

Second Vice President, Dr. J. T. Wilson, Sherman, Tex.

Secretary, Dr. W. E. B. Davis, Birmingham, Ala.

Treasurer, Dr. Hardin P. Cochrane, Birmingham, Ala.

Place of meeting, Richmond, Virginia, second Tuesday in November, 1891.

SCIENTIFIC PROCEEDINGS OF "THE ACADEMY OF MEDICINE AND SURGERY."

RICHMOND, VA., October 14, 1890.

President W. W. Parker, M. D., in the chair; Dr. James N. Ellis, reporter.

In the absence of Dr. M. D. Howe, Jr., who was to have lead in a discussion of "The Water-Closet System," the Academy proceeded to

REPORTS OF CASES.

Convulsions.—The president referred to the case of a mulatto child, æt. 4, which he partially reported at last meeting. The patient is still suffering from convulsions, having had from fifteen to twenty daily for the last twenty days. Mind not materially improved; appetite good, but losing flesh; no history of worms and none following the administration of a vermifuge; no abdominal tenderness; no local pain; bowels regular, but straining and passage of mucus to-day; no fever; skin pleasant; eyes and pupils natural; complete unconsciousness during convulsions.

The president is at a loss to account for these persistent convulsions, but, commencing with a nausea and vomiting, he thinks them probably due to the ingestion and retention in the alimentary canal of some insoluble substance. Dr. Isaiah H. White thinks there is syphilis of the brain, but parents are healthy and there is no history of hereditary syphilis. Drs. M. D. Hoge, Jr., and Thomas J. Moore thought them due to the irritation of an elongated prepuce, which was accordingly circumcised, but the convulsions have not abated since the operation. The speaker has never seen a case of convulsions that he could refer to preputial irritation. Nine times out of ten he thinks infantile convulsions due to improper food and irritation of bowels. If these convulsions were due to disease of brain we would expect to find fever, irregularity of pupils, squint, etc. He is at present taking potassium iodide, but without improvement. Asks for suggestions. Is the cause cerebral or excentric?

Dr. Landon B. Edwards said, that, judging from the remarks of eminent authorities at the recent session of the Medical Society of Virginia, there was too great a tendency to dispense with surgical procedures in certain cases in which they were, in his opinion, of undoubted benefit. He referred to three cases, in his own practice, of convulsions in children which could not be traced to any other cause than preputial irritation. Prolonged treatment by usual remedies was tried in vain; but in each of the three cases no convulsions whatsoever have occurred since the operation of circumcision was performed. In one case the cure has lasted for about ten years, in another for six, and another for twelve months. He would not be understood as affirming that more than a small percentage of convulsions in children was due to preputial irritation. But such cases are of sufficient frequency to require the physician to look for it as a probable cause. A perversion of almost any other of the reflexes may cause slight convulsions. He has known a tack in the foot to produce epileptiform convulsions, with no evidence whatever of tetanus. Penile calculi cause convulsions, and it is of daily occurrence to find them resulting from indigestion.

Dr. Thos. J. Moore saw the case with Dr. Parker during a convulsion, which appeared to be of a reflex or hysterical character. He calls attention to the distinction between epileptiform convulsions and epilepsy. Quotes Reynolds as reporting a case in which there were 1000 convulsions in twelve months, and yet the mental faculties were not materially impaired. Immunity of intellect probably due to fact that the base of the brain in the neighborhood of the fourth ventricle is the locality most seriously implicated. Epilepsy has an unmistakable tendency to impair the intellect, but many of the greatest minds have been subjected to "falling sickness" and yet remained in comparative health and with retention of mental faculties throughout life. Convulsions are due to a great variety of causes, such as traumatism, and the mechanical displacement of bones of the skull, thickening of cerebral membranes, syphilitic disease of the brain and its membranes, or of the cord and its membranes.

In regard to reflex causes: Any abnormal condition of muscle or of tissue sufficient to materially involve the nerves of the part may produce epileptiform convulsions, especially in regions richly endowed with nerves; confinement of nerves in osseous tissue; diseases of chest, and interference with respiration; gastric disturbances, and irritation of the pneumogastric nerve; irritations about the mouth, such as teething; contractions of the esophagus; ingestion of certain foods, giving rise to fermentative changes; worms, especially the *ascarides lumbricoides*.

des and vermiculares; and preputial irritation. Dr. Sayre lays especial stress on this last mentioned cause, and advises that whenever there is an elongated prepuce, and no response to remedies, to circumcise. Medical treatment: Many years ago the speaker saw cases of epilepsy in large numbers in Bellevue Hospital. He was then afforded the opportunity of observing the effect of a great variety of drugs, among them the oxide of zinc, as used by Dr. Alonzo Clark, with relatively good results. Nitrate of silver was abandoned on account of its pigmentating properties. The bromides probably yielded the best results, especially the mixed bromides, or when chloral was added. But when absolute epilepsy, centric in character, occurs there is not much hope of cure.

Typhoid Fever.—The president calls attention to the unusual mortality attending cases of typhoid fever in his practice recently. He has lost more patients from this disease in the last month than he has in the five years preceding. Saw a case day before yesterday which he fears will prove fatal in the next few days. She has a peculiar, unnatural expression about the face, with exceeding pallor of nose, extending to the mouth; stiffness of neck, tendency to sleep, and some signs of cerebro-spinal meningitis. Applied ice cap and blistered back of head.

Another case, on Maddox Hill, began with intense headache. Had been confined a few days before, which gave grounds for a suspicion of septicæmia. Gave 12 grs. calomel and 6 grs. co. ext. colocynth, which was repeated in six hours without effect. Then gave fl. ext. cascara sagrada. It finally developed into a case of typhoid fever, with great sleeplessness. Shaved head, blistered back of neck, applied ice cap and cupped temples without relief. Will give enema of potassium bromide and chloral. The case was seen, in consultation with the speaker, by Dr. H. H. Levy. This makes the fifth case of typhoid fever occurring on the same street, within a distance of 200 yards, in the last five weeks.

Dr. D. A. Kuyk reported the case of a girl, 16 years old, who was taken sick last Friday with headache, tympanitis, abdominal distention, gurgling and tenderness over cæcum; temp. 101.5° F. Bromide of soda partially relieved the headache and restlessness. This condition of affairs continued until Sunday night, when stupor set in and continued to increase until Monday evening, when there were evident symptoms of cerebral inflammation: pupils dilated and dull; upon being aroused would scream out, complaining of headache. The spinal cord did not seem implicated with the cerebral inflammation. Pulse now began to fail and, in spite of stimulants, became dicrotic.

Head was shaved and blistered, and potassium iodide given in commanding doses without effect. Case went on from bad to worse, till on Tuesday the spine became involved with paralysis of bowels and bladder—patient finally dying from exhaustion and complications attendant upon initial disease.

This makes the third fatal case in a series of five cases of typhoid fever occurring in this locality, which, by reason of its elevation and suburban location, is quite isolated.

Case No. 1 was a female brought from Charlottesville, Va., distant about ninety-five miles. She developed cerebritis and died. Nos. 2 and 3 occurred in two previously healthy young men boarding in this house. They were at once removed into the city and did well. Case No. 4 occurred in a woman who had, a few days before, a safe and easy labor. Just prior to this she had visited Case No. 1. She also had cerebral complications and died. Finally, Case No. 5 (the one first above reported) occurred about 150 feet from No. 4, and, developing the same complication, died. Each fatal case so far as I can learn, presented the same symptoms in like order, lasting an equal number of days, and dying in profound coma.

There could have been no contamination through the drinking water, as the first case occurred furthest down the hill, the fourth case at its summit, and the fifth case just below it.

Continued Fever.—Dr. Jacob Michaux reported a case of fever running a course of ten days, without remission or intermission, with a temperature of from 104 to 105 deg. F., in a female 8 years of age, previously healthy. The peculiarity of the case was the extremely high temperature without visible cause. First symptom was follicular tonsilitis with deposit. This lasted only about three days; was not severe. There was no evidence of inflammation about the abdomen: no tympanitis, and negative results after the administration of a vermifuge; no convulsions, but slight delirium at times: no eruption on skin could be detected at any time, in short, no cause could be found for the high temperature. Almost complete anorexia existed from the first. Two grains of quinine were given at 6 and 8 o'clock, morning and evening, for ten days. Phenacetine, antipyrine and antifebrine were successively tried in full doses, without more than temporary effect. Sponging with equal parts of whiskey and water was also kept up during the whole course of the fever. After about ten days, the tongue being still dry, red, and covered with darkish coat, the quinine was discontinued and dilute nitro-hydrochloric acid was given in small doses every four hours.

In reply to a question from the president as to whether he did not consider it a case of typhoid fever, he stated that the chief points of interest in this case was its long-continued high

temperature and the absence of any adequate cause for it. The high temperature he considered as tending to disprove the existence of diphtheria, while the height of the temperature, and the regularity of it, together with the absence of abdominal symptoms, was considered as excluding typhoid fever. Dr. W. F. Mercer, at the request of Dr. M. D. Hoge, Jr., next exhibited an interesting specimen of an aneurism of the arch of the aorta, after which the meeting adjourned.

RAPIDES MEDICAL AND SURGICAL SOCIETY.

The Rapides Medical and Surgical Society met on Saturday, November 1, Dr. Smith Gordon, president, in the chair, and a quorum present. Dr. Randolph read a paper on Hemorrhagic Malarial Fever, which was discussed by all the members. There seemed to be general unanimity as to the treatment of this disease, quinine being the remedy, with arsenic, tinct. iron and mercury, etc. Drs. Gordon and Johnson thought this type of fever was caused by some poison peculiar to itself, whilst Drs. Ashton and Randolph held that the cause was the same that produced the other types of malarial fever; the type produced being the result of constitutional susceptibility in the patient, or the amount of poison absorbed,

After further discussion of a business nature, the society adjourned to meet at the usual hour, on the first Saturday in December.

After adjournment the members were agreeably entertained at supper by the worthy Vice President Dr. E. B. Price.

RAPIDES.

CORRESPONDENCE.

WASHINGTON, D. C., October 27, 1890.

Dear Sir—I am requested by the Hon. Secretaries of the Committee of Organization of the Seventh International Congress of Hygiene and Demography to call attention to the fact that this congress will be held in London during the week beginning August 10, 1891.

The governments of all countries and municipalities and all public health authorities, universities, colleges and societies occupied in the study of the sciences more or less immediately connected with hygiene are invited to coöperate and appoint delegates to represent them at the congress. The Prince of Wales will preside.

A Committee of Organization has been formed, of which Sir Douglas Galton is chairman, and Prof. W. H. Corfield

and Mr. Shirely F. Murphy are honorary secretaries. An exhibition of articles of hygienic interest will be held in connection with the congress. The last of these congresses was held in Vienna in 1887, and was attended by over 2000 persons, and it is expected that the London meeting will be one of great magnitude and importance. Very respectfully,

JOHN S. BILLINGS, M. D.,

Member of the International Permanent Committee.

EDITORIAL ARTICLES.

THE LEPROSY QUESTION.

It is gratifying to see that the daily press of this city has begun to consider in a serious manner the question of leprosy in Louisiana. THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL may call attention to it, but as the JOURNAL only circulates among medical men it can not reach the people in a direct manner. The daily papers possess a vast power as educators of the people; and it is a cause for congratulation that this mighty influence is exerted in a proper manner in making known to the people the danger that lurks in leprosy, and in advocating the adoption of measures calculated to stamp out the disease in our State.

In our last issue we mentioned that Louisiana contained not less than fifty lepers; a conservative estimate would place the number at not less than seventy-five, now *living* in the State. It is impossible to say how many lepers have died since the old leper hospital was abandoned. This same hospital may serve to teach us a wholesome lesson in dealing with our present cases. In Louisiana's colonial days, leprosy was so prevalent that it was justly regarded as a public danger, and one that had to be guarded against. The colonial governors, following the custom that had been handed down for centuries, caused the lepers to be confined to the leper hospital, which was situated on Metairie Ridge, midway between the Mississippi river and Lake Pontchartrain, and which acquired the name of "La Terre des Lèpres." In this hospital the unfortunate sufferers passed the remainder of their days.

This method of confining the lepers was effectual; leprosy died out in Louisiana (or, at least apparently so), and the

leper hospital was closed and abandoned for want of patients.

It would be interesting to trace, if it were possible, the recrudescence of leprosy in our State after its seeming extinction. It certainly must have lingered in some of the rural districts. In and around St. Martinsville, there are some cases. Several victims of leprosy died at the Charity Hospital. Two of the subjects were of French descent (Acadians), and both hailed from St. Martinsville; another was a Norwegian woman, aged about 30, who had a sister in the hospital at the same time, also suffering from leprosy. These Norwegian lepers came to New Orleans during their infancy, and the disease developed here; some of their relatives, however, were leprous. In the last few years leprosy has begun to invade negroes in New Orleans. If let alone, leprosy will not stamp itself out, but, on the contrary, will increase until it assumes the proportions that it had in ancient and mediæval times.

The history of our former leper hospital clearly points the way to a satisfactory solution of the whole matter. But the hospital should be truly a State institution; one that will handle not only the lepers of the city but those also of the rural districts. By such means only can the disease be eradicated from Louisiana. A hospital that provides for the city lepers and overlooks those in the parishes will not attack the disease at all points, but will leave unmolested certain foci whence the disease may again spread over the rest of the State. It is very probable that the present outbreak of the disease might be due to failure of our old leper hospital to draw into its fold *all* of the lepers in the rural and thinly populated districts. Now that communication between all parts of the State is so much better than in former times, there will be less difficulty, in the event of the establishment of another leper hospital, to locate every leper in Louisiana, and thus effectually blot out the disease as far as this State is concerned.

* * *

As an instance of the manner in which the popular mind is beginning to regard leprosy, it would not be amiss to quote the following from the *New Orleans Daily States* of November 18, 1890. In recounting the incidents of a day in a recorder's

court, the paper, after describing an epileptic fit in one of the prisoners at the bar, goes on to say:

"On the heels of the Culbertson episode there occurred another sensation which, this time, disagreeably affected the spectators. A man by the name of Jos. J. Cook was arraigned for vagrancy. Officer Bayhi had arrested him yesterday, on Bourbon near Customhouse street, for pulling door bells and soliciting alms.

"When Cook appeared in court a thrill of disgust went through the audience. His face was bloated, swollen, red and sickeningly shiny. No one could surmise what was the matter with him until the man made his statement, and then those who heard it experienced a cold chill of disgust. Cook said he was afflicted with leprosy.

"His face, he said, was nothing compared to the rest of his body. He had been afflicted for several months. Came from England originally; lately arrived from Galveston. Then he stated that he was from this city, and said he was going to the hospital to be treated by Dr. Miles. Recorder Dreux fined Cook \$10 or thirty days, and the leper returned to the dock—cramful of human beings—to give them a chance of contracting his loathsome disease."

When our people generally become aware of the danger that lies in leprosy, they will demand of their representatives, and in no uncertain tones, to protect them against the insidious and unseen invasion of this loathsome disease.

POPULARIZING MEDICAL KNOWLEDGE.

The duty of the physician does not stop at the mere care of disease; it embraces also prophylaxis, and it is in this direction that the energies of modern medical men are largely directed. A vast amount of popular educational work in hygiene has been performed; hygiene is taught and practised in schools and in factories, and public health is receiving that attention from governments which it justly deserves, for public health means public wealth. Our increasing knowledge of the causes of communicable diseases has enabled us to adopt more accurate, and, therefore, more effectual, measures in preventing them. In carrying out preventive measures, much assist-

ance can be rendered by intelligent laymen; their coöperation is at times indispensable.

A large army of scientific investigators is constantly adding to our knowledge of disease. This knowledge is at first in the possession of medical men, but it should not remain confined to them; to do much good, this knowledge, or a part of it, should be disseminated among the people. Original investigators hardly have the time to write popular works on hygiene: another and very useful class of medical writers prepare our technical knowledge for acceptance by laymen.

An interesting and highly important book engaged in the "missionary" work of popularizing medical lore is that by Dr. T. Mitchell Prudden, on "Dust and its Dangers." The importance of common atmospheric dust as a disease-carrier has not been fully appreciated, either by medical or lay men. It has commonly been regarded merely as a cause of temporary physical discomfort, but its role as medium for the transmission of the active agents of disease has been generally overlooked. It is, indeed, only within recent years that dust has become dignified by being suspected or accused of introducing deadly germs into the human economy. The discovery of the bacillus of tubercle led, among other things, to the explanation that pulmonary tuberculosis was acquired through the inhalation of particles of dried sputum containing bacilli or their spores. This was at first regarded as a far-fetched view, but bacteriological investigations have shown that ordinary dust is more or less rich in germs according to the amount of organic matter and moisture in a given locality. The dust of every city contains large numbers of bacteria of various kinds; but it is chiefly in connection with the specific organisms of the infectious diseases that dust becomes important.

The masses of the people should be informed of the dangers that common dust contains, and should be instructed in the methods of avoiding these dangers. The well written little book of Prudden admirably fulfils these two purposes, and it deserves to be carefully read by physicians and laymen alike.

KOCH'S CURE FOR CONSUMPTION.

It would be difficult to find, in the domain of temporal affairs, anything more important to the human race than the

announcement that Koch had discovered an undoubted cure for consumption. A sure cure for cholera or yellow fever would be received with great joy in certain parts of the world; but every country, every city and every hamlet will give honor to him who will give them a shield against the foe that spares no age, no sex, and no class. The number of persons who die of the various tuberculous affections in one year all over the earth is greater than the population of London. It is frightful to think of the colossal amount of suffering and sorrow represented in that mortality. Consumption does not destroy its victims quickly: it works slowly, yet unrelentingly, making the afflicted ones not only helpless charges but also sources of danger.

Consumption has doubtless existed as long as the human race, yet thousands of years passed and gave us no clear insight into the true nature of the disease until, in 1882, Dr. Robert Koch succeeded in isolating and cultivating the germ, the true morbid agent, of tuberculosis. Koch discovered a certain micro-organism in tubercles in 1880; but he waited and investigated the new parasite for two years before he gave his discovery to the world.

The discovery of the bacillus tuberculosis inspired medical men with the hope that a cure for consumption would soon be found: but year after year rolled by without bringing any glad tidings. At last, a faint gleam of hope was shed by Koch's indefinite and non-committal utterances at the Tenth International Medical Congress. The public mind was thus prepared for momentous developments; and when it was learned that Koch had advanced so far as to put his method of cure to a practical test, the whole world, it might be said, jumped to the conclusion that a cure for consumption had at last been found. Thanks to the admirable enterprise of the *Medical News*, the people of the United States were quickly informed of the actual status of the question according to Koch's own authority.

Koch has not said much: his admirers, more full of zeal than discretion, have made much more noise over the matter than Koch himself. We were daily informed by cable of the application of Koch's "lymph" in the treatment of lupus and other tubercular affections. For observing the effect of the subcutaneous injections of the so-called "lymph," a case of

lupus should be selected. The remedy causes destruction of tubercular tissue, but does not annihilate the tubercle-bacilli: these still retain all their power for evil. In lupus, the phenomena attending the destruction of the tubercular tissue are plainly visible, and conclusively show that the "lymph" has a profound effect upon tubercies.

But lupus forms an inconsiderable part of the ills to which human flesh is heir. The great and all-absorbing question is, how to cure or arrest pulmonary consumption. The "lymph" destroys the tubercular matter in the lungs, but a large sloughing tubercle, which the patient can not get rid of, is a very serious thing. Koch says that the ordinary principles of existing medicine and surgery must here come to our aid.

The nature of the "lymph" is still a profound secret. It was announced in the daily press that Koch would deliver a lecture to physicians on November 26, 1890, at which he would divulge the nature of the remedy, but he failed to keep the appointment made by the newspapers, and we are still in the dark concerning the composition of the "lymph." No matter how it is made, this much we know: that Koch has discovered something that profoundly affects tubercles, and tends to prevent their further growth. This alone is a great thing: the question of getting rid of necrosed tubercular tissue can wait a while longer for a solution.

Koch believes that his remedy will prove a cure for incipient phthisis, but he is unable to say whether the cure will be final and definite. In these days of rapid progress we expect too much in a short time; we should be very thankful to Koch for what he has done, and rely on his tried industry and honesty to furnish us with a cure for the most formidable disease that afflicts the human race.

A fair idea of the action of the "lymph" may be obtained from the following part of Koch's description:

Persons suffering from tuberculosis of the lymphatic glands, bones or joints have been treated with precisely the same success. There has been rapid healing in the milder cases or cases of recent development of the disease, while in severer cases the improvement, while slower, has been steady. Patients with pronounced tuberculosis of the lungs have proved far more susceptible to the remedy than those suffering with surgical tubercular affections. Consumptives have, in almost

every instance, manifested a strong reaction on greatly reduced doses. With such patients, therefore, a beginning should be made with doses of two one-thousandth parts of a cubic centimeter, or even with one one-thousandth part. From this small dose one can advance to such quantities as the patient can easily bear. In the experiments that have been conducted consumptives have accordingly first received a subcutaneous injection of one one-thousandth part of a cubic centimeter. Then, when the temperature increased, the same dose was applied daily until no further reaction occurred. Thereupon the dose was doubled, two one-thousandth parts of a cubic centimeter being injected regularly until again no reaction occurred. This method was continued, with almost always an increase of one one-thousandth part of a cubic centimeter or almost two one-thousandths up to one one-hundredth part, and so on upward. In this way the patient would be brought to take very high doses almost without fever, and almost imperceptibly to himself. Consumptive patients who are still fairly strong reach increased doses much more quickly, and favorable results follow with corresponding rapidity. As a general rule the coughing and expectoration are increased somewhat after the first injections. Then they become gradually less, and, in the most favorable cases, will ultimately wholly disappear. In the cases experimented upon under the direction of Prof. Koch, the expectorations gradually lost their purulent property and assumed a mucous character. The number of bacilli expelled usually decreases only when the expectorations begin to assume the mucous appearance. The bacilli then disappear entirely for a time, but on occasions again appear until expectoration totally ceases. At the same time the night sweats cease, the patients begin to look better and to increase in weight. Patients who have been treated in the early stages of phthisis have all been freed from morbid symptoms within from four to six weeks, when they may be regarded as cured.

THE CLOSE OF THE QUARANTINE SEASON.

On the first day of November last, the Board of Health raised its embargo upon vessels coming from tropical countries and infected ports. Another year has passed and New Orleans has been free from its dreaded scourge, yellow fever, not a single suspicious case passing the quarantine or appearing in the city during the tedious days of our protracted summer season.

It is now so long a time since the last epidemic that many of our younger medical men who have practised in this city

during the past decade have never seen a case of yellow fever in their lives.

During the past twelve years the few cases of Yellow Jack that have slipped through some loophole, have been so quickly discovered and effectively isolated and disinfected, that the disease has in no case been allowed to spread.

Are these not facts for which we should feel proud? We are no vain boasters: we know that accidents may happen even to the most vigilant; and when it was declared some years ago that the methods practised at our lower quarantine station were going to revolutionize things, we looked approvingly on, but asked for the test of time. Now that this test is mellowing to ripeness, we trust that our health authorities will not grow too confident in their success, but remember that as long as filth and elevated temperature are part and parcel with tropical countries our trade with them will be constantly threatened by the saffron scourge.

It is rumored that the Board of Health contemplates lowering the time of detention during the summer months—our most dangerous season—from five days, as it is at present, to three days, including the time occupied in fumigation and disinfection. This we regard as altogether proper and safe, for after all it is less the time of detention than the thoroughness of disinfection that renders a ship free from the germs of disease. Indeed the last vestiges of meaning clinging to that old term *quarantine*, which formerly was used to imply forty days' detention, will soon be forever obliterated in so far as it refers to the system of maritime sanitation practised by the State of Louisiana.

It is a well established fact that yellow fever, even during the most extensive epidemics, yields to frost and low temperature, and, as a consequence of this, our people feel in greater security during the winter months. Such is but natural and reasonable, but it should not blind us to another fact, that during this same season the winters of tropical America are much milder than ours, and yellow fever in the shape of fomites may some day be introduced here during the season in which we are least on our guard, to break out when summer appears with its many conditions favorable to its spread. Let the Board of Health look to this and remember that while we con-

gratulate ourselves upon immunity in the past, our motto should be, for summer and winter, by land and by sea, *Eternal Vigilance*.

ELECTION OF RESIDENT SURGEONS IN THE CITY EYE, EAR, NOSE AND THROAT FREE HOSPITAL.

We are requested by Secretary Jos. A. Hincks of the City Eye, Ear, Nose and Throat Free Hospital, of New Orleans, La., to make the following announcement to the medical profession :

On the first Monday of January, 1891, the executive committee of said institution will proceed to elect, upon the recommendation of the medical staff, two resident physicians.

1. They must be graduates of a reputable medical college.
2. Under thirty years of age.
3. They must sign an agreement to serve for one year.

The hospital will furnish lodging only and its unsurpassed facilities for the study of the diseases of the eye, ear, nose and throat.

For the information of those interested, we will state that during the period of eleven months 32,712 consultations were given to 3206 patients and over 500 operations of all kinds performed.

Applications should be sent in before December 25, 1890. Applicants should state what other degrees they hold besides their medical decree, and should also give references.

DANGER IN POPULAR REMEDIES.

Household remedies for slight ailments may generally be regarded as harmless, but sometimes a hidden danger lurks in what ordinarily is a simple proceeding. Among remedies (not household remedies) there is one which has a strong hold upon the minds of a certain portion of the population, and which is very disgusting. We refer to the custom of washing sore or irritated eyes with the patient's own urine.

Dr. S. D. Kennedy has informed us of a very unfortunate case which appeared at his clinic in the City Eye, Ear, Nose and Throat Free Hospital. A young negro laborer had a slight irritation of the eyes, probably a mild conjunctivitis, which annoyed him. Some well-meaning friend advised him

to bathe his eyes with his own urine. The negro unfortunately followed this advice. He was suffering from gonorrhœa, and, of course, in bathing his eyes with his urine, he gave himself gonorrhœal ophthalmia. When he presented himself at Dr. Kennedy's clinic, one eye was totally destroyed, and the doctor had a hard time in saving the other.

This case should teach the people that it is better to pay a physician and be safe than to economize and endanger health or even life.

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

SURGERY.

A FEW REMARKS ON ELEVATED POSITION OF THE PELVIS IN LAPAROTOMIES,

By PROF. G. LEOPOLD, OF DRESDEN.

Translation by H. J. Scherck, M. D., Visiting Surgeon, Charity Hospital, New Orleans.

Since the beginning of March of this year I have employed the high position of the pelvis, suggested by Trendelenburg in sixty-four successive cases of laparotomies, in place of the horizontal position used in former years.

Up to the former time I had employed the table of Landau in all cases; its simplicity, ease of handling, adjustable compartments made it very convenient for applying bandages, etc.

Unfortunately, it did not satisfy the want which is always felt in horizontal tables, *i. e.*, the inability of the audience to witness the field of operations, particularly the pelvic cavity.

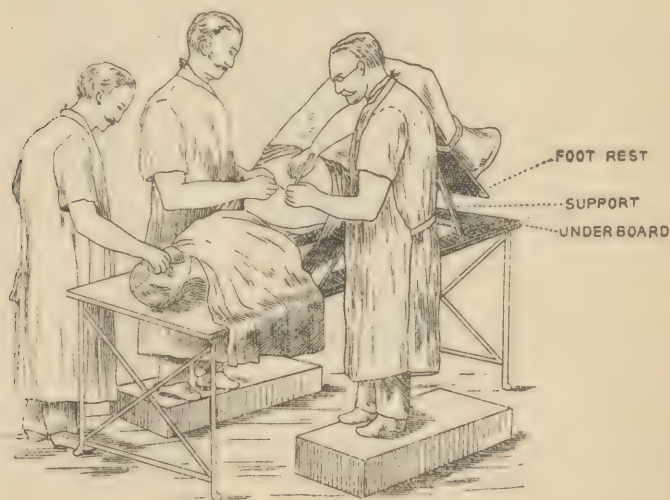
Even those standing on chairs or benches are unable to witness the operation on account of the heads of the assistants. This is, however, entirely done away with in the elevated position. The intestines sink toward the diaphragm, the pelvis is completely emptied, so that the troublesome protrusion of the intestines is of rare occurrence.

With a large, wide sponge in the upper angle of the incision (which I prefer to a soft towel) the intestines are kept back so that a protrusion even when the patient's position is changed is hardly possible.

By this procedure the pelvic organs can easily be seen, for example, in cases of agglutination between rectum and uterus, the various forms of chronic salpingitis and oöphoritis, the

relative position of the diseased organs, the beginning of tubal pregnancy, the various ways of ligation, and suturing, and the cross suturing of the peritoneum after the removal of the uterus by abdominal section.

All these various procedures can be seen by the visitors on the living patient when in this position. In place of a long description the accompanying figures show what is desired in fewer words. In Figure No. 2, the left hand of the assistant



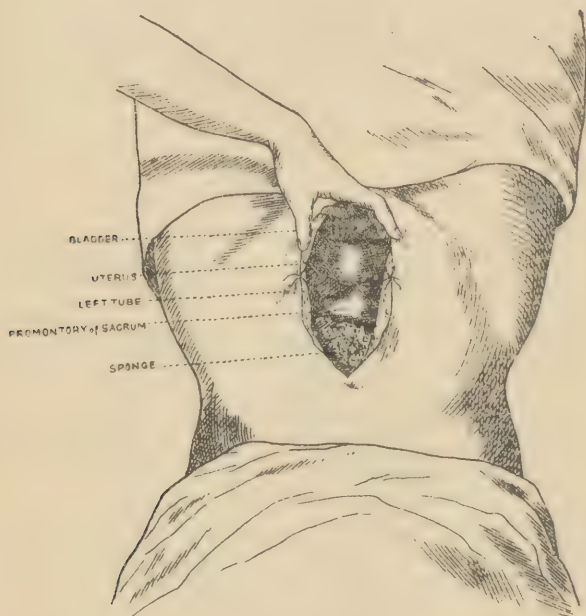
separates the lower angle of the incision, a large sponge holds the intestines back; above this the promontory of the sacrum is seen.

The uterus is somewhat anteverted—the left tubal pregnancy falls into the line of incision and is thus easily ligated. The bladder protrudes slightly over the pubes. In cases of uncleanness, by means of good light every corner and crevice can be seen and cleaned. In removal of the entire uterus from above, it allows the ligaments, arteries and ureters to be plainly seen, which in the horizontal position is hardly possible.

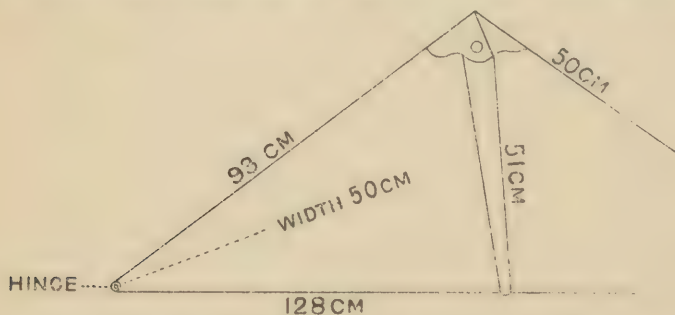
Figure No. 1 shows the patient in the elevated position and the position of the operator and his assistants. Whether the operator stands on the right or left side is a matter of practice. I always remain on the right side. The right arm becomes tired in the first few cases only. If necessary, one finds a convenient rest by leaning his elbow on the thigh of the patient. The table which I have had made, in order to elevate the pelvis, is extremely simple; it consists of a plank 128 cm. long and 50 cm. wide, to which by means of two hinges an upper

board is attached, 93 cm. in length; to the end of this a foot rest about 50 cm. long.

At the junction of this shorter portion on which the legs rest and the longer portion (93 cm. long) on which the pelvis



and thighs lay, it is possible to be bent to a right angle. Owing to a support the top plank can be raised to about 51 cm. above the lower. The longer the supports are made, the higher the upper plank can be raised. This entire apparatus



can be fastened with two screws to a Landau's table. Of course any large or solid enough table can be used for the same purpose. During the preparations for the operation the table is not elevated, but remains in the horizontal position; it can also

be raised or lowered during the operation if necessary on account of disturbances in the narcosis or when deemed practical. And in conclusion it is lowered when suturing the abdominal incision.

Bad results following the use of this table are not to be feared.

A few patients have become slightly cyanosed and in patients with bronchitis it has caused slight coughing, but disturbances of any note have never been experienced. The great benefits derived from the high pelvic position are so great, in all kinds of laparotomies, that I never in any cases use other than this. I have used it in the following sixty-four cases of laparotomy:

21 Ovariectomies.

6 Castrations.

5 Subserous fibroids.

8 Extirpations of the entire uterus through the abdominal cavity.

6 Cæsarean sections.

8 Extra-uterine pregnancies, etc.

Any carpenter can manufacture this table at a cost of not more than four or five dollars.

DERMATOLOGY AND HYGIENE.

ICHTHYOL.

In the long list of remedies for diseases of the skin which have been suggested during the past few years there is scarcely one which has given more universal satisfaction than the sulpho-ichthyolate of ammonium, commonly known as ichthyol.

This substance is prepared from the remains of prehistoric fish and other marine animals, found in large beds in the Tyrol.

It has a strong odor, more like that of tar than of fish, and also resembles the former somewhat in appearance when ready for use in the shops. It is prepared by subjecting the bituminous mineral from which it comes to a dry distillation, and this yields among other products a brownish-yellow translucent oil. The salts of ichthyol are then prepared by treating the raw oil with warmed concentrated sulphuric acid, and removing, subsequently, the excess of acid.

The ammonium base of this salt is sometimes replaced by sodium, but externally the action of these two salts is nearly the same. They contain about 10 per cent. of sulphur, which undoubtedly increases their therapeutic value.

When ichthyol is used internally, the sodium salt is preferred. Its dose is from one to five grains three times a day, and the maladies for which it is used are such as manifest hyperæmia and capillary dilatation with anomalies of the circulatory system.

It is administered in dyspepsia, indigestion, hepatic disorders, acue rosacea, etc.

It was recommended by Unna for the internal treatment of leprosy, but many observers have given it a fair chance in this disease and found it useless,

Externally, it is of the greatest value. Classed by Unna as one of the "resolvent" drugs, it stimulates to resolution the inflammatory products of cutaneous inflammation, is a fair antiseptic, and has a keratolytic or horny-layer-destroying power, which is of the greatest value. Placed upon a large surface, in a salve of two drachms of vaseline, it draws, softens, and wrinkles the skin like a flax-seed poultice. Indeed, ichthyol can be used in many cases where it is customary to apply a poultice. Applied in this way and sufficiently early, it may be used to abort a felon. Sprained ankles and rheumatoid joints; local inflammations, where the tissues are comparatively intact; erysipelas, frost-bite, and chilblains—all are greatly benefited by ichthyol.

In the treatment of eczema of the chronic or subacute form, tar has been for many years the sheet anchor, but ichthyol, acting in some ways exactly like tar, surpasses it in others, though less stimulating than chrysarobin, it can be used for a longer time and with greater advantage. Not so powerful in its action as pyrogallol, it is safer and less painful, being harmless if absorbed.

Chronic squamous eczema of the hands may be successfully treated by combining it with salicylic acid in the following formula:

R Ichthyol	3 iss.
Acid, salicylic	3 i.
Vaseline	3 j. m.
S.—Apply three times a day.	

In acne ichthyol has been found of service, used in a strong salve for four or five days, then replaced by a mild zinc oxide salve for the same length of time, after which the ichthyol is to be used again. The only objection to this treatment is that the patient is debarred from appearing in public because of the disfiguring appearance produced by the dark ointment.

Ichthyol has been used of late as a counter-irritant, applied externally over the throat or chest for inflammations within, and the results, particularly in the former, have been very satisfactory.

IMMIGRANT DERMATOSES.

Dr. J. C. White, of Boston, in a paper on this subject, published in the *Journal of Cutaneous and Genito-Urinary Diseases*, draws the following conclusions with reference to the sanitary inspection of persons coming into the United States from foreign countries:

Unless some more stringent laws are made to keep out of our country the pauper and dirty populations of Europe, the direct importation of the diseases we have been considering, and those which may arise as well from the filthy habits they bring with them and transmit to their children, must follow with increasing magnitude. If the proposed plan of the U. S. Marine Hospital Service, to station physicians in every European port from which immigrants embark to this country for the purpose of keeping back improper classes, be made sufficiently authoritative and restrictive, it can not fail to be of vast benefit. It is certainly as important to protect ourselves by legislation against the introduction of ignorance, filth and disease, as against cheap labor, if we would keep our civilization upon a high plane. The Chinese have set us an example of building walls, which we might better erect against other nations than theirs.

In conclusion, I venture to suggest for the consideration of this association the propriety and importance of memorializing the national government with regard to taking such steps as may be possible and practicable for the establishment and execution of the following measures:

1. To cleanse all immigrants of animal parasites on landing by treatment of person and clothing.
2. To retain in quarantine all immigrants with other contagious diseases, including venereal affections, a sufficient time for treatment.
3. To return to their homes all persons affected with such contagious diseases as it is impracticable to treat in such a way, as leprosy, tuberculosis, and advanced syphilis.
4. To provide for efficient medical inspection at foreign ports of emigration, with the power of arresting importation of dangerous diseases to this country.

FALSE HAIR.

The English consul at Canton declares in a published report that during the past year there were exported from the city of Canton 80,000 pounds of human hair, costing \$1500. The consul remarks that this hair comes for the most part from the heads of mendicants, criminals, and persons who have died from conta-

gious disease, and that it seems strange that elegant European women do not hesitate a moment about using it.—*Revue Sanitaire*.

ANTIPYRIN IN CUTANEOUS AFFECTIONS.

One of the symptoms which is most disagreeable in a large number of skin diseases is the intense itching or soreness which causes scratching, with consequent injury to the parts involved. Many remedies are now added to the applications usually ordered to allay this troublesome state. Chief among these are carbolic acid, menthol, chloral hydrate, cocaine, but even these often prove inefficient. According to Blaschko, of Berlin, antipyrin proves a most valuable remedy under such circumstances and he recommends that for infants the following be given internally:

℞ Antipyrin..... $\frac{1}{2}$ drachm.
Simple syrup..... 1 ounce.

Dose: Half a tablespoonful at night before going to bed.

Sometimes large doses are needed, but excellent results are to be obtained by this means in eczema, urticaria, strophulus, pemphigus, lichen ruber and planus.

Not only does it prove palliative, but often curative, probably by preventing scratching. Antipyrin may also be used for hysterical pruritus with advantage, but in adults must be given in full doses and frequently.—*Medical News*.

THE TREATMENT OF ACNE.

The following extracts are from a paper by Dr. H. W. Blanc in the journal of the American Medical Association:

“Acne may be due to a variety of causes, but the commonest of these is indigestion. This word must be taken in its broadest sense as implying impeded function of some portion of the gastro-intestinal canal. It behooves the physician, then, who would treat this affection successfully, not only to search out the causes of indigestion directly located in the alimentary canal, but also to thoroughly inform himself of the condition of the liver, the blood and the reproductive organs, inasmuch as the function of the stomach and bowels may be directly impeded by poverty of the blood or torpidity of the liver, on the one hand, and, in a reflex way, by dysmenorrhœa, or irritation of the external genitals, on the other.

“It has been my habit to lay down rigid rules of diet for acne patients, which must be strictly adhered to even in the mildest cases. These rules are framed with a view to increasing the alkalinity of the blood and promoting the daily evacua-

tions of the bowels. A vegetable and fruit diet is recommended in some cases, meat being altogether interdicted, and in others a small quantity being allowed only once a day. Green vegetables should not be dressed with vinegar or mustard, and all salads and pickles are forbidden. Milk, and the alkaline mineral waters may be drunk at or between meals, but tea, coffee and other stimulants must not be taken. In case of weakness an occasional whiskey toddy may be taken before meals; though it is not recommended. Nothing is to be eaten between meals, and nothing just before retiring. It is needless to say that rich pastry, and other food containing fatty substances, nuts, etc., are not to be partaken of.

"These rules will apply in nine cases out of ten. But occasionally we meet with people who can not drink milk, or with whom fruit does more harm than good. Of course a special diet must be planned for these particular cases.

"*The bowels must be made to move daily.* To accomplish this an orange or an apple taken an hour before breakfast, or the juice of a lemon mixed with a small quantity of water, will frequently be all that is necessary. But sometimes the habit of constipation is so strong that it requires something more active than the fruit acids to bring about the desired result. If the patient is weak and anæmic, or if the skin has a waxy look, and the sebaceous openings are relaxed (patulous) and inclined to form numerous comedones, it is well to give some remedy which would be a tonic to the system and at the same time have a laxative effect upon the bowels. I do not know of anything which will produce these two results better than the magnesium cum ferro mixture, which may be ordered as follows:

℞	Magnesii sulphatis	℥j.
	Ferri sulphatis.....	gr. iij.
	Acidi sulphuric, dil	℥j.
	Aquæ cinnamoni	℥vj. ℥

S.—Tablespoonful in a little water two hours before breakfast.

"The dose here given is usually enough to produce one action a day, but should it be insufficient another tablespoonful may be taken at bedtime.

"Sometimes the iron is not indicated, or it may be more desirable to give a medicine which can be made up in pill form. For this purpose nothing is better than cascara sagrada. This is frequently administered as a fluid extract, but its disagreeable taste is against it as a medicine for constant use, and consequently I have fallen out of the habit of using it in solution, giving instead the following pill:

℞	Extract cascara sagrada,.....	℥ss;
	Extract hyosciami,.....	gr. iv. ℥
	Ft. pil. No. 20.	

S.—One pill morning and evening.

"This pill may be taken before or after meals, as the patient finds it most convenient, and serves the purpose of giving tone to the bowels, so that when stopped after two or three weeks of use the constipation which usually attends the stoppage of laxative medicines is not apt to occur. The hyoscinamus is added to this pill in order to prevent griping, but I have acquired the habit of prescribing it always with the cascara pill, for I believe it has a special action of its own in other forms of skin disease, such as erythema (urticaria) when attended by constipation, and in which I have given it with marked success."

Referring to the use of ichthyol in acne, as recommended by Unna, we read:

"This substance (usually the sulpho-ichthyolate of ammonium) is dark brown in color with a pitch-like consistence, and has a strong penetrating odor, more or less disagreeable to the majority of patients. It is usually too stimulating to the skin in ointments of over 50 per cent., but combined with vaseline, in the proportion of 30 per cent. of ichthyol and 4 per cent. salicylic acid, it may be expected to give good results in acne, provided that the pustules are opened in the usual way, and the proper remedies exhibited for the purpose of removing any ascertainable exciting cause. One of the worst cases of acne that I have ever treated was cured with the following ichthyol salve:

R	Ichthyol.....	3vj.
	Acid. salicylic.....	9ij.
	Vaseline, q. s. ad.....	3i j m.

S.—Apply to face night and morning.

The author's conclusion is as follows:

"If asked to sum up in a few words the proper plan of treatment for acne, I should be inclined to say that it consisted in *strong and constant antiseptis* WITHOUT, and the *correction of disordered function* WITHIN."

BOOK REVIEWS AND NOTICES.

Essentials of Practice of Medicine. Arranged in the form of Questions and Answers. Prepared especially for students of medicine. By Henry Morris, M. D., late Demonstrator Jefferson Medical College, Philadelphia; Author of *Essentials of Materia Medica*, etc. With a very complete *Appendix on the Examination of Urine*. By Lawrence Wolff, M. D., Demonstrator of Chemistry, Jefferson Medical College. Philadelphia: W. B. Saunders, 913 Walnut street. 1890.

Dr. Morris declares his book to be "intended as an *aid* to the advanced student of medicine who is preparing for his degree, or to the young practitioner in diagnosing affections or selecting the remedy for them." For the purposes intended by the author we heartily recommend this question compend.

The appendix on the examination of urine is a valuable addition, thus uniting two subjects in one volume. II. W. B.

NECROLOGY.

DR. J. J. GAUTHREUX.

It is with pain that we announce the death of Dr. J. J. Gauthreaux, of this city. The opening pages of this number of the *Journal* contains a valuable article from his pen—the last, perhaps, he had written. On October 28, 1890, at 1 o'clock, A. M., while attending a patient, Dr. Gauthreaux was stricken with paralysis, and expired in a few minutes.

Dr. Gauthreaux was born in St. James Parish, La., in 1824. He studied in Paris, and, returning to Louisiana, he spent the most of his life in his native parish. Four years ago he moved to New Orleans and continued the practice of medicine. He was universally esteemed, and his taking away is a distinct loss to the medical body and to suffering humanity.

PUBLICATIONS RECEIVED.

Index Catalogue of the Library of the Surgeon General's Office, United States Army. Authors and subjects. Vol. XI. 1890.

1. The Prevention of the Short Leg of Hip Disease. 2. The After Treatment of Hip Disease. By A. B. Judson, M. D.

A Criticism of Willett's Operation for Talipes Calcaneus. By A. B. Judson, M. D.

The Pendent Limb in the Treatment of Joint Diseases of the Lower Extremity. By A. B. Judson, M. D.

The Medical Student's Manual of Chemistry. By R. A. Witthaus, A. M., M. D. Third edition.

Bacteriological Technology for Physicians. With seventy-two figures in the text. By Dr. C. J. Salomonsen.

Diagnosis and Operative Treatment of Gunshot Wounds of the Stomach Intestines. By N. Senn, M. D. Read at Tenth International Medical Congress.

Post-Mortems; what to look for, and how to make them. By A. H. Newth, M. D., London.

The Medical News Visiting List. 1891.

A Manual of Auscultation and Percussion. Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M. D., LL. D. Fifth edition.

Essentials of Minor Surgery and Bandaging, with an appendix on Venereal Diseases. By Edward Martin, A. M., M. D. Saunders' Question-compend. No. 12. 1890.

MEDICAL ITEMS.

INCONTINENCE OF URINE IN CHILDREN.

The treatment of incontinence of urine must depend upon the discovery of the proper cause in each specific case. Where the urine is highly acid it should be neutralized by the administration of alkalies. The acetate of potash is one of the best preparations for this purpose. Fruits often do well in children old enough to partake of them, as the vegetable acids are changed to alkaline bases in the system. Where the fault is from the detrusor acting too vigorously, belladonna serves as a specific. Five drops of the tincture of belladonna may be given three times a day at first, and the dose increased by single drops, until there is some dryness of the throat and flushing of the skin. If the drug is to control the incontinence at all, it will do so when such effects are produced. For a lack of force in the sphincter, ergot in full doses is indicated. A good effect follows the injection of five or six drops of the fluid extract of ergot into the connective tissue of the ischio-rectal fossa, as recommended by Dr. H. D. Chapin, of New York. In all cases of incontinence of urine everything possible should be done to tone up the nervous system, and to this end the speaker mentioned syrup of the iodide of iron and strychnine in full doses as being valuable.—A. J. Swaney, *Med. Record—Therapeutic Analyst*.

GORRECTION.

Editor Medical and Surgical Journal—DEAR SIR: In your issue of September, 1890, in Dr. Dibrell's report, it is stated that my operation of amputation at the hip joint by the bloodless method had been done four times for disease, with two recoveries. The doctor is in error, since all the cases recovered. So far I have not heard of a death following the new method. I am firmly convinced the death rate will be brought to 10 per cent. or lower.

Yours sincerely,

JOHN A. WYETH.

MORTUARY REPORT OF NEW ORLEANS.

FOR OCTOBER, 1890.

CAUSE.	White	Colored	Male	Female	Adults	Children	Total
Fever, Yellow							
“ Malarial (unclassified)	14	4	13	5	11	7	18
“ Intermittent	1			1	1		1
“ Remittent	4	4	3	5	2	6	8
“ Congestive	4	3	4	3	5	2	7
“ Typho-Malarial	4	1	3	2	5		5
“ Typhoid or Enteric	2	1	2	1	2	1	3
“ Puerperal	1			1	1		1
Scarlatina							
Small-pox							
Measles							
Diphtheria	8	1	4	5	1	8	9
Whooping Cough	2	1	3			3	3
Meningitis	7		3	4	1	6	7
Pneumonia	11	12	14	9	7	16	23
Bronchitis	8	2	5	5	5	5	10
Consumption	34	42	38	38	71	5	76
Cancer	11	3	4	10	14		14
Congestion of Brain	5		1	4	4	1	5
Bright's Disease (Nephritis)	8	7	11	4	14	1	15
Diarrhœa (Enteritis)	28	6	20	14	18	16	34
Cholera Infantum	3	3	5	1	1	5	6
Dysentery	4	2	3	3	6		6
Debility, General	2	2	2	2	4		4
“ Senile	14	15	15	14	29		9
“ Infantile	6	5	6	5		11	11
All other causes	171	99	148	122	172	98	270
TOTAL	352	213	307	258	374	191	565

Still-born Children—White, 23; colored, 12; total, 35.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 22.89; colored, 36.78; total, 26.69.

DIPHTHERIA RECORD FOR OCTOBER, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	3	1	4	1	2	1	3
2	2		2	2	1		1
3	2		2	3	1		1
4	2		2	4	1		1
5	2		2	5	2		2
6	1		1	6	1		1
7				7			
	12	1	13		8	1	9

No Scarlatina reported during the month.

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—OCTOBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths	SUMMARY.
	Mean	Max.	Min.		
1	64	70	58	0	Mean barometer, 30.046.
2	68	77	59	0	Highest barometer, 30.294, 27th.
3	72	82	63	0	Lowest barometer, 29.705, 22d.
4	74	85	63	0	Mean temperature, 69.0.
5	76	87	65	0	Highest temperature, 87, 6th; lowest, 49, 27th.
6	78	87	69	0	Greatest daily range of temperature, 25, 29th.
7	72	76	68	0	Least daily range of temperature, 4, 16th.
8	78	84	71	T	MEAN TEMPERATURE FOR THIS MONTH IN—
9	78	86	70	T	1871.....70.7 1876.....67.4 1881.....75.2 1886.....60.5
10	78	86	70	.18	1872.....68.2 1877.....69.9 1882.....73.3 1887.....68.1
11	78	86	69	0	1873.....67.9 1878.....70.7 1883.....75.4 1888.....68.0
12	76	85	68	.70	1874.....70.2 1879.....72.2 1884.....74.4 1889.....70.4
13	76	85	68	0	1875.....66.9 1880.....67.9 1885.....65.7 1890.....—
14	68	73	63	.16	Total deficiency in temp'ture during month, 46.
15	68	78	59	0	Total excess in temp'ture since Jan 1, 324.
16	70	72	68	2.03	Prevailing direction of wind, E.
17	68	75	62	.60	Total movement of wind, — miles.
18	72	76	68	0	Extreme velocity of wind, direction, and date,
19	70	74	65	T	40 miles, W., 13th.
20	66	74	57	0	Total precipitation, 5.24 inches.
21	66	70	62	0	Number of days on which .01 inch or more of
22	62	66	58	1.13	precipitation fell, 7.
23	60	65	54	.44	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
24	63	70	56	0	FOR THIS MONTH IN—
25	66	75	57	0	1871.....9.09 1876.....0.24 1881.....4.84 1886.....0.22
26	64	69	60	0	1872.....3.18 1877.....9.15 1882.....2.16 1887.....4.71
27	54	60	49	0	1873.....1.89 1878.....5.07 1883.....3.43 1888.....7.36
28	58	68	49	0	1874.....0.00 1879.....1.36 1884.....5.60 1889.....0.26
29	68	81	56	0	1875.....2.09 1880.....1.88 1885.....0.56 1890.....—
30	70	82	59	0	Total deficiency in precip'n during month, 2.07.
31	54	60	49	0	Total deficiency in precip'n since Jan. 1, 14.15.
					Number of clear days, 17; partly cloudy days,
					8; cloudy days, 6.
					Date of Frosts, none.
					Mean maximum temperature, 76.3.
					Mean minimum temperature, 61.7.
					Dates of thunder storms, none.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, *Sergeant, Signal Corps Observer.*

PUBLISHERS'



DEPARTMENT.

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NEW SERIES:
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VOL. XVIII.
No. 6.

NEW ADVERTISEMENTS IN THIS ISSUE.

	PAGE.		PAGE.
The R. Hyde Co	27	The New Orleans Polyclinic	26

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Arlington Chemical Co	12	Pomeroy Truss Co	1
Battle & Co	11	Planten's Capsules	13
Bellevue Hospital Medical College	18	Robinson-Pettet Co	2
Boehringer & Soehne	10	Sanitarium—Von Gohren's	13
Bowden Lithia Springs Co	23	Sanitarium—Sunny Side	16
Celerina	19	"Sanitas" Antiseptics, etc.	1
Cerebro-Spinant—I. O. Woodruff & Co	21	Schiffelin & Co., W. H.	3
Claudel, Optician	16	Sharp & Dohme	11
Cook, Gus	18	Tarrant & Co	15
Diovisburia	25	Tasteless Quinine	13
Health Restorative Co	4	The Wm S. Merrell Chemical Co	9
Herrick Uterine Supporter	18	Victor Safe and Lock Co	24
Kentucky School of Medicine	16	Wagner Medical Manufacturing Co	7
Lilly & Co., Eli	8	Wheeler's Tissue Phosphates	13
Marchand's Peroxide of Hydrogen	28		
Mariani & Co	5		
Martin's Vaccine Virus	16		
McDermott, A	13		
Medical Dep't of the Tulane University	18		
Moore-McGregor Medication	16		
New York Medical Journal	17		
N. Y. Pharmaceutical Co	6		
N. Y. Post-Graduate Medical College	20		

COVER.

Buffalo Lithia Water	3
Fairchild Bros. & Foster	2
Fellows, James I.	4
Sharp & Dohme—Chemists	2

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OUR JANUARY ISSUE

Will contain a paper by DR. RUDOLPH MATAS, of New Orleans, on "A CASE OF FILARIA SANGUINIS HOMINIS IN NEW ORLEANS."

BUFFALO LITHIA WATER.

SPRING No. 2.

IN THE TREATMENT OF

URIC ACID CALCULI.

ART. IV.—BUFFALO LITHIA WATER IN THE TREATMENT OF STONE
IN THE BLADDER—ITS SOLVENT PROPERTIES—ITS VALUE
IN BRIGHT'S DISEASE, CYSTITIS, ETC.

BY JOHN HERBERT CLAIBORNE, M. A., M. D., OF PETERSBURG, VA.

Ex-President and Honorary Fellow Medical Society of Virginia, etc.

Reprint from the Virginia Medical Monthly of December, 1880:

"I have for many years been prescribing the use of Buffalo Lithia Water in cases of lithiasis, uræmia, Bright's disease, cystitis, and of congener affections, and with the same marked results which have followed its exhibition in like conditions by a number of other physicians. The most striking instance, however, in which I have seen the solvent properties of the waters manifested has been in the case of Mr. Thos. D. Moss, of this city. Mr. Moss has been subject to attacks of lithiasis for several years; but in August last, after one of the most violent attacks of nephritic colic, passed gravel from the kidney into the bladder, where it remained for a week or more, setting up a severe inflammation of that viscus, with all of its painful and distressing symptoms. Finally, however, the gravel re-commenced its journey and became lodged in the prostatic portion of the urethra, cutting off the flow of urine and causing retention. Being compelled to use a catheter for the relief of this symptom, I pushed the calculus back into the bladder, as there was too much inflammation to resort to either the crushing of the stone or its removal by lithotomy.

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JANUARY, 1891.

WHOLE No. 313.

No. 7.

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Celata virtus.*—HORACE

The

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TABLE OF CONTENTS.

PAGE.

An Imported Case of Filaria Sanguinis Hominis (Parasitic Chylocele) in New Orleans.—By Rudolph Matas, M. D.	501
Proceedings of Societies.	522
The Homœopathic Corn.	547
The Care of Lepers in the United States and elsewhere.	549
Medicine.	553

Laryngology, Rhinology and Otology	564
Dermatology and Hygiene.	568
Book Reviews and Notices.	572
Medical Items	573
Mortuary Report.—November.	575
Meteorological Summary, November, 1890	6
Publishers' Department.	

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NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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JANUARY, 1891.

No. 7.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.

AN IMPORTED CASE OF FILARIA SANGUINIS HOMINIS (PARASITIC CHYLOCELE) IN NEW ORLEANS. ✓

By RUDOLPH MATAS, M. D.,

Visiting Surgeon Charity Hospital, etc.

In 1886, Dr. John Guiteras demonstrated the existence of the *filaria sanguinis hominis* in Charleston,¹ S. C., and since that time the probable endemic prevalence of the filaria disease (*filariosis* of French authors) in the Southern States, and particularly in the territory bordering upon the South Atlantic and Gulf coasts, has been practically established by the observations of that investigator, by those of Dr. Wm. Mastin,² of Mobile, Ala., and by the later confirmatory report of Dr. De Saussure,³ of Charleston, who, from 1886 to May, 1890, had been able to collect twenty-two cases of this affection in natives or residents of Charleston who had apparently contracted the parasite while residing in that city.

The object of this paper is mainly to add another link to

(1) The *Filaria Sanguinis Hominis* in the United States—Chyluria, by John Guiteras, M. D., Medical News, April 10, 1886.

(2) The History of the *Filaria Sanguinis Hominis*—Its discovery in the United States, and especially the relationship of the parasite to chylocele of the tunica vaginalis testis. By Wm. Mastin, M. D., etc., Mobile, Ala., Annals of Surgery, pp. 321-362, vol. viii, 1888.

(3) A clinical history of twenty-two cases of *filaria sanguinis hominis* seen in Charleston, from 1886 to May, 1890. Medical News, June 28, 1890, p. 705.

the chain of evidence pointing to the active existence of this remarkable parasite in the Southern States by presenting the details of a case of parasitic chylocele of the tunica vaginalis testis, which recently came under the writer's observation. This case, while distinctly of exotic origin—the patient having acquired the disease in an acknowledged habitat—Cuba—proves that this hematozoon finds in this locality all the conditions that are congenial to its existence and leads with good reason to believe that other not altogether rare cases of lymphatic disease,—chylocele, chyluria, elephantiasis—that have been observed here and reported as existing in natives and residents, but that have not been subjected to microscopical scrutiny, also owe their true origin to the invasion of the parasite. It is, however, not with the view of adding a fact to the geographical distribution of the disease and to the history of the filaria in the United States, that this report has been written, but to direct the attention of the local profession to the necessity of a more careful inquiry into all cases of lymphatic disorders that may fall under their observation and that are known to be connected with the existence of this parasite in the human body.

On August 6, 1890, the patient, C. A., male, æt. 19 years, presented himself at my clinic in Ward 8, Charity Hospital. He is a native of Matanzas, Cuba, and a cigar maker by occupation. He came to New Orleans nine months ago and has resided here ever since. The parents of the patient, who are native Cubans, are both living and healthy. He, himself, has always enjoyed an apparently good health with the exception of the trouble for which he now seeks relief. The patient states that about three years ago, while in Cuba, he began to notice that his left testicle was larger than the right, though it never inconvenienced him in any way except by its size which though not very remarkable, still annoyed him because of the simple fact of its abnormality, and mainly, perhaps, because he suspected that the unusual size of the testes was causally associated with an increased tendency to seminal emissions which he had observed of late.

On examination, it is at once apparent that the left testicle is larger than the right, though the increased bulk is not greater

than four or five times that of the companion organ. On palpation an effusion is recognized in the tunica vaginalis, though this presents a peculiar semi-solid feel and is devoid of that globular tension and elastic resistance of the typical hydrocele. The patient gives a history of repeated gonorrhœa, no syphilis, no traumatism. The scrotum is itself perfectly normal; the cords on both sides are of usual thickness and consistence and the lymphatics of the groin are not notably enlarged.

Exploration, with a hypodermatic syringe, reveals the existence of a whitish fluid of the consistence and appearance of milk.

The diagnosis of chylocele was thus established, and a specimen of the liquid was sent to Dr. A. McShane, assistant pathologist of the hospital, for microscopical examination. The report was shortly returned, confirming the diagnosis of the chylous nature of the fluid, and adding the statement that the fluid swarmed with the embryos of the *filaria sanguinis hominis*, thus also corroborating the diagnosis of *parasitic chylocele* which was suspected and stated at the time of the clinical examination.

The details of the microscopical examination and subsequent investigation into the condition of the blood, which were kindly and carefully undertaken at my request by Dr. McShane, are fully detailed in his report, which is herewith appended, and which clearly entitles him to the credit of having been the first to demonstrate the existence of the *filaria sanguinis* in this city.

The possibility of establishing a complete chain of evidence by the discovery of the adult nematode in the fluid of the sac or in the lymphatics of the cord was then thought of, and following the very rational and authoritative advice of Dr. Wm. H. Mastin, of Mobile, I decided to adopt Volkmann's incision for the cure of the hydrocele.

On September 16, assisted by Dr. McShane and other members of the staff, the tunic was opened and a diligent and minute search made for the parasite or a dilated varicose lymphatic that might serve as a guide to the resting place of the obturating worm. The tunic was of the usual *normal* thickness;

the testicle perfectly healthy. Though the tunic was turned inside out no opening leading to a vessel or any peculiarity of the cord could be detected which could, in any way, guide us to the hiding place of the *parent* filaria.

The wound had, therefore, to be dressed with the usual aseptic precautions and the patient sent back to bed without furnishing the last and most desirable piece of evidence.

The subsequent career of the case was only remarkable in the promptness of the recovery and the total absence of operative sequelæ; notwithstanding the prolonged manipulations and exposure of the parts, there was absolutely no unhealthy reaction in the wound or swelling in the testes. On the fourth day the stitches holding the scrotal integument to the tunic were removed and on the sixth day the patient walked home with a simple iodoform collodion over the site of the incision.

A few days after the patient had completely recovered from the operation, his right testicle, which had never troubled him before, began to annoy him by its tenderness to the touch and became the seat of shooting pains that radiated up the cord; it became preceptibly swollen and tender, though no effusion was detected in the tunic. These symptoms of orchitis gradually subsided and disappeared altogether in a few days.

As the pain in the testicle disappeared the patient began to complain of intermittent fever, which assumed a distinctly quotidian and then tertian type. The fever never rose higher than 103° , and persisted nearly two weeks, and was peculiar simply because of its absolute rebelliousness to the most vigorous and systematic antiperiodic medication. Finally, the paroxysms ceased simultaneously and the patient, at my recommendation, decided to try the effects of a cold climate in a decidedly northern latitude and higher mountain atmosphere with the hope that by this radical change in his environment he might finally succeed in ridding himself of his parasitic guests. I understood that he would try the effect of the climate of Colorado, which he preferred for business and personal reasons, but since his departure I have not heard from him and consequently can not report his present condition.

REPORT ON THE FLUID OF A CHYLOUS HYDROCELE, ALSO ON
BLOOD FROM THE SAME PATIENT—CARLOS A.

By A. McShane, M. D., Assistant Pathologist.

The fluid from a chylous hydrocele (about one drachm), was sent to the pathological department for examination on the afternoon of August 28, 1890. A drop of the fluid was mounted on each of two slides, and hermetically sealed with Canada balsam by the laboratory assistant, who kept them for examination by me on the following morning. The balance of the fluid was thrown into a small bottle containing a mixture consisting of carbolic acid and glycerine. The fluid was immediately coagulated, and formed a mass having almost the consistence of the white of a hard-boiled egg.

The liquid mounted on the day of its arrival at the department had not changed on the following day. When examined with a $\frac{1}{12}$ immersion lens, it presented an immense multitude of exceedingly minute particles in active Brownian movement. The whole field was filled with this moving mass. There were granules of different sizes; the smallest were scarcely visible and colorless, while others ranged in size up to about one-fourth of the diameter of a red blood corpuscle. These larger particles had a slight but distinct yellowish tinge, and all displayed the Brownian movement. They were not fat-globules, for these do not have that movement; and, moreover, ether failed to affect their form or color. Many of these colored granules seemed doubled, or appeared to send out a little bud. The active movements of these bodies made it very difficult to trace out the destiny of these buds. One of these same drops of fluid, which was kept hermetically sealed, showed no alteration in the appearance or movement of the granules one week after it was mounted. Some large oil-globules were seen, but they, doubtless, were introduced on the trocar. No parasites were found in either of these preparations.

In order to ascertain if the liquid contained any or much fatty matter, a small piece of the coagulated mass was taken and treated with ether. At first nothing but faint, wavy outlines could be distinguished; later on, some of the outlines were seen to possess a peculiar shape, which were apparently

those of small round worms in various positions. A closer search disclosed one of these that had a well defined tapering at one end, and a rounded extremity at the other. About a dozen such forms were found imprisoned in the small piece of the coagulum, and they all bore a striking resemblance to one another. In order to bring out their form more clearly, I placed a drop of a solution of eosin under the cover-glass. This staining showed that the figures that I had seen were embryos of the *filaria sanguinis hominis*. Another piece of the coagulum was stained with methyl-blue and it showed the embryos very clearly.

At the request of Dr. Matas, I examined some of the patient's blood drawn at night. The blood was drawn from the forearm at 9:30 P. M., August 28, 1890. Several drops were mounted fresh and examined at once by (Edison) electric light, but no filariæ were seen at the time. The corpuscles were thickly crowded together, and constantly moving, so that it was not difficult for the filariæ to pass unnoticed. However, in order to be sure that there were or were not filariæ circulating at that hour, two cover-glasses were smeared with blood, which was allowed to dry, and stained and examined subsequently; in one preparation one embryo was found, and in the other two embryos; so that there was no doubt about the parasites being in the blood at 9:30 P. M.

In order to ascertain how long the parasites circulated in the blood, the patient took with him four cover-glasses, and at midnight he punctured the skin of his forearm and placed a drop of each on two cover-glasses, and allowed it to dry exposed to the air. At 5 A. M. he did the same with two other cover-glasses. When they were dry he brought them to me carefully packed so as not to be disturbed or injured. They were stained with eosin. Each of the midnight specimens contained five embryos; of those obtained at 5 A. M. one contained three and the other two embryos.

When the coagulated hydrocele fluid was stained a large number of lymph-corpuscles were brought out. In the fresh specimen they could be seen, but were not so clearly defined and did not differ very much from the surrounding granular matter.

On September 16, 1890, Dr. Matas operated on the hydrocele, with a view to finding and removing the female worm which gives birth to the numerous embryos. A preliminary tapping was performed and a little more than an ounce of milky fluid removed. When a portion of this liquid was shaken with ether, no very great change was observed. The agitated mixture was at first cloudy, but the solid matter quickly settled to the bottom of the test tube and formed a gelatinous mass; when the ether was poured off the mass adhered to the tube. When some of this was examined microscopically, the same granular matter was seen, but the Brownian movement was arrested. The supernatant ether in the test tube was unchanged in color. Chloroform, glacial acetic acid, and liquor potassæ did not entirely clear up the liquid; acetic acid seemed to have the most marked effect, making an opalescent mixture. Nitric acid and picric acid merely produced a dense coagulum, as they would in any albuminous liquid; no alteration in color, or other change, took place. *Filaria*-embryos were found in the aspirated liquid.

The fluid from this chylous hydrocele had all the characteristics which Frey ascribes to chyle. Frey says: "On microscopical examination, the chyle of mammiferous animals presents a certain amount of turbidity—the cause of its white color to the eye—produced by innumerable dust-like particles suspended in it, and not by small particles of fat with which this fluid was formerly supposed to be so richly filled. These particles (as is usually the case with substances in a minute state of division suspended in fluid) are engaged in a peculiar tremulous or restless movement, termed the *molecular motion* of Brown. The more opaque and milky the chyle appears, the more numerous are these molecules found to be. They decrease in number again in the larger passages of the lymphatic system, and are completely absent in the clear lymph of fasting animals. Eventually these particles flow from the absorbents into the blood through the *ductus thoracicus*, and may form in it transient constituents of the plasma. As to ascertaining their magnitude, with any approach to accuracy, we must confess our utter inability to do so, owing to their extreme minuteness. These dust-like molecules consist, we are told by H. Müller, of neu

tral fats, enclosed in a wondrously delicate layer of coagulated protein substance.”

* * *

In view of the recent discovery of the *filaria sanguinis* in the United States as an active colonist, if not an actual aborigine, of its southern seaboard, and the possibility that with increasing commercial relations and facilities for transportation with the Antilles and Spanish America it may still further find in our midst a congenial *nidus* in which to exhibit its prodigious reproductive activity, it will not be superfluous or uninteresting to some of the readers of this paper to delineate, if only in the most synoptical manner, its essential individual characteristics, life history, its effects upon the human hosts, and the means that are known or have been suggested to rid the individual and the community of its presence.

The credit of the discovery of the *filaria* is generally accorded to a German physician, Dr. Otto Wucherer, of Bahia, Brazil, who, on August 4, 1866, while microscopically searching for the *bilharzia hæmatobia* in the urine of a patient suffering with tropical chyluria, discovered a number of minute worms (embryos), presenting no indications of a digestive tube or sexual organs, and which were unknown to him. The same observation was repeated shortly after by the same observer in a case of hæmaturia.

These specimens were sent to Leukart, the eminent helminthologist, for identification, who suggested that they were the embryos of some round worm belonging most probably to the *strongylidæ*.

The French claim, however, that the honor of this discovery should belong to Demarquay* (*Gaz. Med. de Paris*, 1863), whose description appears to justify the claims made. “He observed, that in the liquid withdrawn by tapping a hydrocele and which, he says, has the appearance of milk, there were present a number of very active animacules whose description closely approaches what we know of the *filariæ*” (Lanceraux).

Dr. J. H. Salisbury, United States, in 1868 also independently found in the human bladder a minute entozoon, which he

*Vide Lecture, by Dr. Lanceraux, “De la filarïose,” *Semaine Medicale*, p. 332, Vol. VIII, 1888.

designated the *Trichina cystica*, which from the description might be regarded as the ova and embryos of the filaria.

Timothy Richard Lewis, in 1868, independently discovered, in Calcutta, the embryos in a specimen of chylous *urine* and called attention to them; Crevaux and Spencer Cobbold made confirmatory observations shortly after.

It was Lewis, however, in 1872, who first demonstrated the existence of the embryo filariæ in the blood and applied the name *filaria sanguinis hominis*, by which it has since been designated. By subsequent investigations this observer recognized the fact that the patients in whom he could find this hæmatozoon suffered with various lymphatic disorders, such as chyluria, elephantiasis (lymph-leg or scrotum) and lymphatic varices. Manson, of Amoy, China, confirmed these researches.

Bancroft, of Queensland, Australia, first discovered a dead female *adult* worm in a lymphatic abscess of the arm, 1876 (hence the name *filaria Bancrofti*, which was applied by Cobbold to the mature worm). The existence of the parent worm was subsequently distinctly confirmed by the same observer.

The male and female specimens of the adult helminth were discovered by Lewis, also, a little latter, in 1877. These specimens were found coiled together in a piece of scrotum resected for nevoid elephantiasis in a Bengalee subject.

From this period to the present date, the literature of the subject has been much increased, so much so that Dr. W. H. Mastin, of Mobile, in his masterly and comprehensive essay, already referred to, was able to collect, up to 1888, 126 monographs or papers on the subject, exclusive of his own contribution. Since 1888, more papers have been contributed, but it is doubtful if any great light has been thrown upon any of the obscure questions which still puzzle the observer of the life habits of this parasite in the human body.

* * *

The natural history of the filaria is in itself very interesting. Let us summarize briefly what has been learned in this respect. There are two filariæ: the embryo, or Wucherer's filaria, and the adult, or Bancroft's filaria. Both are parasites of the human body. The adult filaria, it must be remembered,

is never found outside of the lymphatic vessels or glands. As hinted in the preceding historical note the existence of the adult worm remained unknown long after the discovery of the embryo filaria. The embryos, so easily recognized in the blood, were at one time regarded as the complete and perfect worm.

It was Bancroft's discovery of the adult female worm in 1877, and the learned observations of Spencer Cobbold that established on a positive basis the parental relationship of the adult or Bancroft's filaria to the minute hæmatozoon or embryo which had been previously recognized in the blood.

This adult parent worm presents the appearance to the naked eye of a fine, thin hair or thread, and measures from three to four inches in length, and displays active movements. The male, which was first recognized by T. R. Lewis, is thinner than the female ($\frac{1}{180}$ inch, transversely), but of firmer texture, and manifests a greater tendency to coil. The morphological and sexual characteristics have been minutely studied by Cobbold, Lewis, Manson and other observers. A narrow digestive canal extends from the head almost to the tip of the tail, the remainder of the body being almost exclusively devoted to the reproductive organs: the vagina of the female, which is very short, bifurcates in two uterine canals, which are almost always packed with ova and embryos of all ages.

The embryo, which is so easily recognized in the blood and lymph, possesses, according to Lewis, an average diameter "of about that of a red corpuscle, and its average length about forty-six times that of its greatest width; that is to say, its greatest transverse diameter is about $\frac{1}{3500}$ of an inch, and its length $\frac{1}{75}$ of an inch." but he has occasionally seen specimens of not more than half this size. (Mastin, *loc cit.*)

T. R. Lewis again gives the measurements of the ova in which the embryos were not yet distinctly evident as $\frac{1}{1300} \times \frac{1}{2000}$ of an inch: and that the ova in which the embryos were visible were $\frac{1}{600} \times \frac{1}{700}$ of an inch in size.

These comparative measurements are of practical interest in considering the causes of lymphatic obstruction by filarial embolism.

When the embryo filaria has been freed from its encapsulating membrane or shell it presents itself under the microscope

as a transparent and almost structureless little worm, which moves with vigorous and graceful serpentine movements in the blood current, dashing along and ploughing its way rapidly through the mass of blood corpuscles.

If the medium in which they are contained is allowed to dry, these organisms become granular and assume a striated appearance owing to the retraction of the enveloping membrane (chorionical sac); if they are abandoned in an extravasated liquid, or in urine, or in an ascitic liquid, they become invisible after a certain time. They should therefore be sought for always in fresh fluids.

In the blood they exist in variable numbers: sometimes their number is enormous: as many as forty or fifty have been counted in a single drop. Mackenzie estimated that the blood of a single patient could contain as many as 40,000,000. He has very recently estimated that over 11,000,000 existed in one of his patients who was also affected with a peculiar African disease, the sleeping sickness. Dr. McShane estimated an average of ten to the drop, in the blood of the patient C. A., whose case furnishes the basis of this report.

The questions that now suggest themselves are: Whence comes this vast brood of parasites? What is the fate or destiny of these parasites when once harbored in the organism? How does the economy resent the incubus of their presence when thus burdened with them? These are all interrogatories which have been answered more or less satisfactorily, and which involve some of the most difficult problems that naturalists and pathologists have been called upon to solve. It is with their solution that the names of Bancroft, Spencer, Cobbold, T. R. Lewis, Sonsino, Araujo, and of that most acute observer, Patrick Manson, are indelibly associated. It is the work done by these investigators that has made the history of the *filaria sanguinis* one of the most interesting and brilliant chapters in parasitic pathology.

The adult *filaria* has, as already intimated, a distinct preference for the lymphatic system; in fact, it has never been discovered outside of a lymphatic vessel, gland or cavity. On the other hand, the embryo *filaria* is equally at home in the blood and in the lymph. This is one of the earliest facts ascer-

tained by research. Now, why does the adult parasite prefer the lymph as its habitat? That is a problem in adaptation or selection as regards the environment that is well recognized in other examples of human and comparative parasitism and which may be explained by future study.

This peculiar selective affinity for the lymph or its organs on the part of the *filaria sanguinis hominis*, is rendered more striking by comparison with the life habits of the *filaria immitis*, an analogous member of the *filariidæ* which infests the dog, but which differs from the human filaria in this: that both adult and embryo parasites are residents of the vascular system, in which they cohabit and multiply. The adult filaria immitis inhabits the right auricle and ventricle and pulmonary artery of the dog; it measures twelve to eighteen centimeters in length and is aggregated in colonies numbering several pairs of both sexes. The embryos of these worms, which are born in the heart and large pulmonary trunks, and which measure about one-fourth of a millimeter in length, follow the corpuscles through the pulmonary capillaries, and in this way reach the left side of the heart and by the aorta, are disseminated throughout the arterio-venous system.

Whilst the analogy is very great between the human and dog filariæ, there is an additional fundamental difference between them which is very striking, namely, that in the dog, the embryo is able to attain sexual maturity in the body of the host, whilst in the human parasite such a transformation is not possible without the intervention of an *intermediary host*. This leads to another phase of the subject which is as important as it is interesting.

* * *

The mosquito is the sexual liberator of the filaria.

That the mosquito might be the intermediary host was first suggested by Bancroft, who informed Dr. Cobbold in April, 1877, that he suspected the larvæ were imbibed by mosquitos and other suctional insects whilst engaged in their predatory attacks upon man.

It was Dr. Manson, however, who conclusively proved the correctness of this assumption. This observer demonstrated that the female of a special variety of mosquito, "after penetrating the skin of the victimized subject, deeply buries her proboscis

in the blood current and to which the circulating embryo-filariæ quickly adhere, becoming attached or entangled by means of their lashes or loose chorional envelopes. Being securely held in this manner, they are the more readily conveyed in large numbers along with the blood to the stomach of the mosquito, and after thus gorging herself she repairs to the water to fulfil the chief aim of life—the deposit of her ova.

“Many of the embryo-nematodes are digested or expelled in the excreta, but a few, obedient to the decree of the survival of the fittest, remain to undergo interesting developmental changes. These changes require from four to six days for completion, and at the expiration of this period the metamorphosed filariæ are then discharged either with the larvæ or gain their liberty by boring through the body of the insect after dissolution, and thus probably escape into the water in the state of free nematodes. Through this medium infection undoubtedly occurs either by the avenue of the mouth—being swallowed in the potable water, or by penetrating the skin of bathers; but this is simply conjectural, and hence a broad hiatus exists here in our knowledge of the wonderful life cycle of the animal which will require both time and a peculiar association of propitious circumstances to bridge over.*

“In reëntering the human body, whether directly or possibly through the agency of another bearer, it soon reaches sexual maturity and seeks its destination in the lymphatic system—probably a distal branch, where it is accompanied or followed by a male, and *conjunction of the sexes takes place.*” (Mastin).

* * *

Intimately connected with the life history of the filaria sanguinis and with that of its intermediary host, the mosquito, is

* It should be remembered that the female culex mosquito stings often twice and even three times before laying her ova, and that it is possible that the mosquito may thus directly inoculate a healthy individual. It is hardly probable, however, that a filaria which had simply resided in the proboscis of the mosquito would have thus been sufficiently influenced by the mosquito to give it the developmental sexual impetus necessary for future propagation in the new host.

In connection with this subject it is of interest to note the following observations:

“Bancroft detected forty-five filariæ in the body of a single mosquito.” (Mastin).

“According to Manson, a single mosquito is capable of carrying about 120 filariæ in its stomach. Of these five or six only survive the digestive energy of the mosquito, and at once begin to undergo the transformation (in the stomach of the insect) from the asexual embryonic state to the adult sexual condition.” (Bordier.)

“T. R. Lewis, of Calcutta, found that four out of eight mosquitoes captured at random in one of the servant's houses harbored specimens of hæmatozoal embryos identical, apparently, with those he had previously seen in man.” (Mastin.)

the remarkable phenomenon of *filarial periodicity*. We are also indebted to the patience and profound observations of Patrick Manson for our first knowledge of this phenomenon.

In the case of C. A., which serves as a basis to these remarks, this phenomenon was, as usual, well marked. During the day, or during the waking hours, the filariæ totally disappear from the blood; during sleep, or at night, they return and swarm in the circulation as sleep becomes deeper and complete. Sleep alone is not essential for the appearance of the filariæ in the blood, but the influence of the *habitual* hours of rest is a dominant factor in the production of the phenomenon. In the case of our patient, he could remain awake until 12 or 1 P. M., and the examination of the blood drawn at that hour revealed the abundant presence of filariæ which had been absent during the day. There is no doubt, however, that if the patient had completely changed his habit of sleeping during the day and remained awake all night, that the *inversion* of filarial periodicity, discovered by Stephen MacKenzie, would have been produced.

Now what is the cause of this filarial periodicity? What becomes of the filariæ during the waking hours of the host? Does the vast horde of parasites which swarm in the blood, the 40,000,000 that have been estimated by MacKenzie, die in the course of a few hours, and is this enormous mass of life reproduced in the short space of a single night? This is the opinion of some observers (Myers, Sonsino), but it appears to the writer to be decidedly opposed to reason and common sense, even when the most extraordinary reproductive powers are granted to the adult parasites. It should be remembered that the filaria may exist in the blood of its hosts during almost the whole period of natural life. S. Lima Araujo knew patients who had suffered with filarial chyluria during 14 and 22 years respectively; Sonsino reports the case of a Jewess, aged 55, in Egypt, who had been similarly affected over 20 years; and the case of a creole lady is mentioned by Lanceraux (*loc. cit.*), who died at the age of 80 years, and who for over 50 years prior to her death had been chyluric and a constant hostess of the filariæ! Other remarkable instances of the longevity of the parasites are cited by Lewis, Hackley, Manson and others.

Now, when we consider (1) that the periodic appearance and disappearance of the filaria takes place daily in the course of many years in which its presence is recognized in the body, (2) the size of the parent filaria, (3) and their very limited number (the removal of one female being sufficient in some cases to arrest the future generation of embryos), (4) the asexual character of the *embryos* whilst inhabiting the body of the primary host, thus throwing the whole burden of the reproductive function on the first pair or pairs of sexual or mature filaria which have been introduced into the body, it will be conceded that the destruction and reproduction theory of filarial periodicity is hardly tenable.* On the other hand, the theory of Manson, who believes that instead of dissolving every twenty-four hours the embryos simply retreat into some organ, cavity or part of the blood-vessel system, is much more rational and agreeable to analogical induction. That this is the case with the filaria immitis, or dog filaria was proved by Manson.

The blood embryos of this helminth also display a certain periodicity, which is curiously, however, the reverse of that displayed by the filaria hominis. In the dog, when the animal sleeps, the filaria disappear from the peripheral circulation: when it awakes, they swarm throughout the distribution of the blood current. Now Manson proved that instead of dying and disintegrating during these remissions they are to be found resting in the minutest ramifications of the pulmonary artery. Having proved this much, "Dr. Manson did not have to seek long for the interpretation of this peculiar periodicity. His discerning mind at once saw in it a beautiful example of the operation of a grand natural law, namely, the adaptation of the habits of the filaria to the nocturnal wanderings of its indispensable liberator and secondary host, the mosquito.

"But while the object of this periodicity was apparent, the cause, agency or producing force was shrouded in obscurity, and, indeed, remains unelucidated.

*While the embryo-parasites are evidently not destroyed every 24 hours it would appear that they can not be very long lived if their lower order of organization and the facility with which their vitality may be impaired by apparently trivial causes, are to be accepted as proper criteria. Consequently, an adult filaria must still remain an extraordinary example of sexual fecundity.

This excessive generative power can be well accounted for by the demands of the fierce struggle for existence which the embryos must wage with living elements of the tissues in order to survive till the period of their liberation by the intermediary host where, again, a new struggle is begun out of which only very few escape to reach the final goal—the differentiated sexual condition.

“On account of the periodicity being one of every twenty-four hours, Manson suggested the proposition that it might be influenced possibly by the regular diurnal revolutions of the earth, operating either directly upon the parasite in the human blood, by means of some of the regular quotidian and rhythmic fluctuations in the meteorological conditions produced thereby; or indirectly, by inducing in the human bearer certain daily and methodic habits, upon which depend the actions of the nematoid embryos. Subsequent systematic observations by himself, together with examinations by others, however, enabled him to eliminate the *direct* operation of these influences, and hence he now considers that filarial periodicity is dependent, not on meteorological conditions resulting from the daily revolutions of the earth, but on the *habits* this great fact impresses on the human body.” (Mastin.)

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The pathology and pathological anatomy of the filaria disease can be summed up in the words: *lymphatic obstruction by parasitic embolism*. The multiple lesions which have thus far been recognized in conjunction with the presence of this hæmatozoon are all traceable to lesions of the lymphatic system and its appendages and are explicable by the general theory of obstruction.

The mechanism of the obstruction has been described by Manson in his explanation of the true pathology of the elephantoid diseases produced by this parasite. Again, quoting from Mastin's most thorough summary of this author's views, we observe that “in the life history of the filaria the fully formed or outstretched embryos offered no impediment or retardation to the natural onward flow of lymph, for, having a diameter about that of a lymph corpuscle they penetrated without difficulty wherever these corpuscles passed; and, therefore, with them they freely traversed the minutest channels of the lymphatic system and emerged into the blood. On the contrary, this is very different with the semi-spherical ovum, where the immaturely developed embryo is still coiled up in its enveloping sheath within the uterine tube of the parent, since in this ova state its diameters far exceed that of the fully formed embryos; and, consequently, when it

is prematurely discharged into the lymphatic vessels it affords the required embolism, the current is interrupted or stopped, and lymphstasis or regurgitation results. Thus, it is only needed for a prolific female, aborting or miscarrying from some, as yet inexplicable, cause, to expel her ova in numbers into the lymphatic circulation to produce plugging, more or less complete, of the lymphatic glands receiving the lymph from a limited or extended area, according to the location of the worm."

In the majority of cases the lesions produced by the filarial parasites involve the peripheral lymphatics of the external genitals and of the lower extremities, though the deeper internal lymphatics and those of the upper extremities and, in fact, of the whole body, may sometimes be thus involved. By the mechanism above described, we can easily account for the elephantoid diseases, of the lower extremities, comprising elephantiasis of the leg, and of the scrotum, lymph-scrotum, enlarged and varicose groin glands, which, according to Manson, constitute 58 per cent. of the cases in China. "The American cases thus far reported comprise chyluria, hæmato-chyluria, chylocele of the tunica vaginalis testis, superficial lymphatic abscesses, elephantiasis scroti, lymph-scrotum and groin glands," though chyluria and chylocele are probably the most frequent expressions of the parasite in North America (Guiteras).

Numerous other conditions, due directly or indirectly to lymphatic derangement, have been attributed to the presence of the parasite, but these need not be referred to here, except perhaps, the curious condition known in the East as *craw-craw*, a disease characterized by a transudation of lymph from the skin, a species of lymphorrhœa cutanea.

Finally, the larger serous cavities may also be the seat of chylous effusions, and thus give rise to chylo-thorax or chylous ascites.

With lesions so numerous and variable it is plain that the clinical history of the disease must vary with the localization of the parent worm in each particular case, and that any attempts at a general description of the disease as a whole

would, in view of these varieties, be too unsystematic to be practical.

The time which elapses between the admission of the parasite and the manifestation of its favorite lesions—its incubative period, is, as can well be understood, quite difficult to determine. This period can only be estimated in an approximate manner, and only by counting the time intervening between the date of departure from an endemic focus to the time when the lesions manifest themselves. Lanceraux (*loc. cit.*) tells us that in the case of hæmato-chyluria several observations have been made, and this period may vary from a few months to five or six years. In one of his cases, the patient was first attacked with chyluria while in the North Sea, two years after leaving the Antilles.

* * *

After reading the description of the numerous lesions which may be determined by the presence of the filaria in the organism, it would be natural to expect that very serious and grave general troubles would necessarily characterize the history of these patients; but this is far from being true in the majority of the cases.

The general health of filarious individuals is generally well preserved: though they are sometimes anæmic, pale, especially when the disease has been of long standing: their strength wears out with the least fatigue and they stand badly any excess of atmospheric heat. This is particularly the case in the more persistent cases of chyluria and hæmato-chyluria. Fever is not of frequent occurrence in these cases, though it appears to be more liable to occur in the earlier stages or manifestations. It is more often an accompaniment of chyluria or hæmaturic paroxysms. Filarial patients appear to be particularly prone to the phlegmasiæ of the skin and of the serous membranes, and are reputed to be especially disposed toward contracting erysipelas and incurring the risks of suppuration.

Therefore, notwithstanding their good appearance, the filarious individual is a poorly nourished subject and is more liable to inflammatory troubles and to suppurations which render him an unfavorable subject for operations. (Lanceraux.)

That this is not always the case, in the minor manifestations of the disease, is well attested by the exceptionally good result which followed the operation (Volkman's section of the tunica vaginalis) in the patient reported in this observation.

Again, the filaria disease appears to be one of long duration, and, judging by general experience and by the special observations which have been elsewhere quoted, it would appear that the life of the host is not materially abbreviated by the presence of this all-pervading parasite, even when, strange to say, it gives rise to some of its worse and more wasting complications, *e. g.*, chyluria. In this respect, the case of the creole lady who lived up to the age of 80, after having been the hostess of the filaria for the last fifty years (with parasitic chyluria) of her life, is decidedly significant.

Recovery from this disease appears to be the rule (Lanceraux); the cure takes place spontaneously, either as a result of emigration or even without emigration, in consequence, most probably, of the death of the parent filaria, which in this case meets the fate occasionally observed in other parasites, *viz.*, the cysticercus and trichina, which perish frequently enough before destroying their host, after a more or less prolonged sojourn in the human organism.

A fatal termination is rarely brought about by the filarial infection; more often it is the result of a phlegmasic complication, which is prepared for by the bad condition of general nutrition. But it is especially when these inflammatory conditions are localized in the diseased lymphatic system that they acquire the most serious import. The least cause will provoke an explosion, a forced march, a scrotal erysipelas, a trivial surgical operation in the neighborhood of affected glands may become the starting point of a series of complications which as a rule end fatally. (Lanceraux.)

* * *

The prognosis of the filaria disease is not as grave as one would be tempted to believe in the presence of the number of filariæ, often prodigious, which are frequently recognized in the blood. "It is worthy of note," says Lanceraux, "that these numerous parasites affect but slightly, if at all, the composition of the blood, and do not alter the organs, if we except

the lymphatics of certain regions. Their embryonal condition and their inability to reproduce themselves in the human organism, render them, relatively, but slightly dangerous; and furthermore they run great chances of destruction if not of elimination in the course of a certain number of years. The importance and the gravity of the disease depends, therefore, only on the number of adult filariæ which are contained in the lymphatic organs and in the predisposition of those organs to inflammatory lesions. By incessantly pouring their ova and embryos into the blood, the adult filariæ keep up the filarial disease, and for this reason it will be readily understood that it is toward their destruction that the efforts of our therapeutics must be directed.

* * *

When we consider the mode of propagation of the *filaria sanguinis* and the conditions that are necessary to its penetration and development in the human organism the prophylaxis of the diseases produced by this parasite must resolve itself into the practical sterilization of the drinking water in the infected or threatened communities. This sterilization (in a sense restricted to the elimination of the filaria from the potable waters) is easily accomplished by both boiling and filtration, the latter method being no doubt the one best adapted to the needs of a community. The dangers of infection are of course practically avoided by drinking artesian well, spring, river or any other kind of running water. But usually the communities in which the filaria thrives best are those which depend for their water supply mainly upon tanks, cisterns or reservoirs of *still* water. Such is the case in Charleston, S. C., thus far the most filarious city in the United States.

New Orleans, however, which depends mainly upon its cisterns for its supply of drinking water, is particularly adapted to the developmental needs of this parasite. When we consider its semi-tropical climate, the abundance of the mosquito, which in summer is a veritable plague, and the large negro and mixed population—its favorite pabulum,—we can only wonder at the comparative rarity of chyluria, chylocele and the other lymphatic disorders which are so intimately connected with filarial parasitism. I have examined the annual reports of the Charity Hospital for the last ten years, and, outside of the last

two cases of chylocele which came to the out-clinic for treatment this year, I have not been able to find any reference to cases that would even justify the suspicion of this form of parasitism. As these cases, however, would generally be admitted only to the out-clinic, it is not surprising that the reports are so scant in references to them, since the diagnosis of the diseases treated in the out-door department are never specified in the reports and consequently this means of estimating the frequency of filarial disease in this city is made unavailable.

It is certainly true that the filaria disease is a rare affection in our city and that if the parasite is at all dangerous to this community it is only in the sense of the *future* colonization of imported adult worms from the Antilles and South American ports—as by the repeated immigration of individuals infected, like the one whose history serves as the basis of this report. It is hardly probable, however, that in a city under proper sanitary surveillance the spread of this disease could ever assume anything like the proportions of a scourge or epidemic evil, as is the case in Amoy, China, and the surrounding country, where, according to Manson, about one out of every eight persons bears the filaria sanguinis hominis, “and that the embryo nematode will be found once in every thirteen individuals examined.” In Bahia, Brazil, according to various authorities, “the proportion of the population affected by the parasite is equivalent to $8\frac{1}{2}$ per cent.” (Mastin.)

It is, nevertheless, important that the progress of the disease be carefully watched, and it is mainly to draw the attention of the profession to this question that these remarks have been written.



The specific medicinal therapeutics of the filaria disease when it has once manifested itself in the human subject are very limited and are practically circumscribed to the surgical attacks that have been directed or may be directed toward the destruction of the parent worms where these are localized in accessible regions.

No remedy has thus far been discovered or suggested which would cause the disappearance of the embryo filaria in the blood. And, in fact, such a remedy is not the one indi-

cated. The filariae sanguinis living in the blood, where they are doomed to exist in the embryonal or asexual condition, are sterile, and are, in a general way, not dangerous in themselves, for when they cease to be produced they will end by being totally destroyed or eliminated. Therefore, as Lanceraux very properly says, "the therapeutic problem in this disease is not so much how to combat the embryos, no matter how numerous they may be, but how to destroy their generators."

In view of the well known preference of the adult nematode for certain parts of the lymphatic system, attempts have been, and should be always, made, whenever the diseased territory is accessible to surgical exploration, to remove or destroy the adult female parasite. In this way several cases of parasitic chylocele, elephantiasis and glandular enlargements have been cured, and with them the accompanying general disease. But at best the search for the adult worm is most difficult, and, as a rule, poorly rewarded, and consequently many, if not the majority, of the cases of this disease are not amenable to any *specific* form of therapeutic interference.

Fortunately, however, the inefficacy of medicinal therapeutics is readily compensated by the powerful influence of climatic changes, which in this, as in other forms of tropical parasitism, promptly and favorably impresses the filarial patients and finally completely rids them of their disease. Thus it is that a radical change in the environment of the host—emigration to cold climates and residence in high altitudes—will gradually affect the vitality and finally work the destruction of these minute but offensive and inaccessible parasitic guests.

PROCEEDINGS OF SOCIETIES.

ORLEANS PARISH MEDICAL SOCIETY.

REGULAR MEETING, NOVEMBER 24, 1890.

Dr. Chas. Chassaignac, president, in the chair.

Dr. H. W. Blanc read a synopsis of a paper on

LEPROSY.

The subject was treated under several different headings.

I.—Heredity.

The doctor had never seen the lesions of leprosy in a new-born child. Usually when the disease is well marked in the mother she either aborts or bears delicate children that die during infancy.

II.—Diet.

The speaker considers diet a most important factor in the etiology of this disease. There seems but little doubt that one of the ways in which this disease may be acquired is through the introduction into the system of uncooked animal food, generally through the alimentary canal, but occasionally through the skin.

A large number of cases observed in this city occurred among Germans, and the custom of eating raw ham is common among the poorer German population.

Most of the cases examined by the speaker were questioned as to diet, and it was ascertained that they ate very freely of vegetables, and, if not fond of, had at times eaten raw meat.

Intestinal worms occurred in several of the cases before the disease manifested itself. An Irishman had eaten raw beef six months when a tape worm developed; the practice was discontinued, and a few months later leprosy manifested itself.

Many leprous persons are scorbutic and it is difficult to determine whether leprosy brings on a scorbutic condition, or whether those who live on salt meat and eat but few vegetables are particularly liable to contract leprosy.

The disease may be introduced into the system by means of decomposing animal material coming in contact with cuts or abrasions of the skin.

When this occurs, the first evidence of the disease is an ill-defined erythematous spot followed by other macules.

III.—Lowered Vitality.

Most cases of leprosy in Louisiana are seen among the poorer classes, who are unable to provide themselves with suitable food and clothing. In those cases that were healthiest the disease seemed to develop after having been temporarily indisposed from other causes.

Syphilis furnishes no immunity.

IV.—Infection.

The disease, the doctor thinks, may be contracted in this way, and cited several cases in support of this assertion.

A nurse in the hospital seemed to have been inoculated by cutting his face while shaving, and in the case of Father Boglioli, the disease seemed to have entered the system through the inflamed mucous membrane of the nasal passages.

V.—Varieties.

For convenience it is well to describe different varieties of leprosy, but owing to the fact that the varieties are often blended and the symptoms are so different in the different stages of the same case, it is very difficult to give an accurate or well defined description of the varieties.

VI.—Prevention.

Dr. Blanc advocates the erection by the State of a lazaretto, where all persons afflicted with this malady shall be confined and cared for by the State.

The hospital to be situated on high ground and a short distance from the city, and all dangerous communication with the outside world cut off.

DISCUSSION.

Dr. H. D. Bruns said he considered heredity a very important factor in the etiology of leprosy.

Most of the cases occurring in this country are descendants of foreigners from leprous districts.

The disease may occur oftener among the lower classes, whose food is poor and depressing; but the speaker was not inclined to attribute any special causative influence to the diet.

The disease is not exactly contagious, but is what may be called communicable. Mentioned the case of a sailor who, it is said on good authority, cohabited with leprous women and contracted the disease in this way.

He considers the so-called varieties of leprosy as different stages of the disease. The cases he has seen all began with a peculiar macular eruption, followed by the tubercular form. Later on the symptoms vary according to the parts into which the peculiar granular substance may become infiltrated.

Dr. F. W. Parham said he had conversed with Father Boglioli on many occasions, and had taken a careful history of his case, for a medical gentleman. He did not think the first symptoms of the disease occurred in the nasal mucous membrane, though he could not assert this positively.

Dr. P. E. Archinard said, during his service as interne of the Charity Hospital he had attended several cases of lep-

rosy: handling and dressing their wounds without observing any precautions.

Dr. Blanc said since the writing of his paper he had observed two other cases. One of them ate raw meat freely and the other furnished a history of having been cut with a cheese knife.

M. J. MAGRUDER, M. D.,
Secretary.

SCIENTIFIC PROCEEDINGS OF THE ACADEMY OF MEDICINE
AND SURGERY.

RICHMOND, Va., October 27, 1890.

Dr. W. W. Parker, president, in the chair.

Dr. Wm. B. Gray read a paper upon

INDIGESTION, A CAUSE OF BRIGHT'S DISEASE.

He said he needed not to remind us that it is claimed by those whose business it has been, and is, to investigate the subject, that to enter circulation substances *must become peptones as a prerequisite to absorption*. With this proposition, delicate as is the great subject and gravely as he regards the issues of the material question, in the light of investigation and of experience as well, he must modestly venture to take issue.

In the outset it is pertinent and proper to glance at normal digestion so far as proteids are concerned, they being the ones with which we particularly have to deal in the consideration of our subject.

Saliva exercises no action on proteids or fats. The stomach chymifies and its product is of acid reaction. This acidity is subsequently neutralized by the alkali of the intestinal mucous membrane and the pancreatic juice.

2. Pepsin and the dilute hydrochloric acid transform proteids into a soluble form, to which Lehman gave the name of peptones. These peptones are probably retransformed into serum-albumen before being absorbed and entering the circulation. The pancreatic juice, though much more energetic, acts very much as does the saliva-ferment. Its ultimate action is to convert proteids into true peptones or tryptones.

The bile, acting vigorously upon the now alkalinized pabulum or food, converts the same into chyle. By this time in the process of digestion it is ready for absorption, becoming assimilable or convertible into tissue. The large intestine is an absorptive rather than a secretory canal. At the beginning

of the colon its contents are thin and watery, becoming more solid in their further course. Klug and Korick regard Lieberkühn's glands as absorbing structures. In the dog the secretion of the large intestine has no digestive properties. Toxic substances are more rapidly absorbed here than from the stomach. Unchanged fluid egg-albumen, milk and the proteids, flesh juice, etc., all have been absorbed. This proves that a non-assimilable albumen—not a *peptone*—may find an entrance into the circulation.

By way of parenthesis here, T. W. Frazer was quoted as saying that all infused beverages such as tea, coffee, cocoa, etc., retard the peptic digestion of proteids; while brandy, whisky and gin, in moderate quantity, promote digestion by exciting the secretory glands. Wines are inimical, especially to salivary digestion, because of their acidity. By reason of the tannin it contains, tea is more objectionable than either coffee or cocoa.

The whole intestinal tract, from the cardiac orifice of the stomach to the anus, being lined by columnar epithelium, is capable of performing the function or act of absorption. Though the mouth and œsophagus are lined by squamous epithelium they are adequate to effect absorption, as may be proved by placing cyanide of potassium on the tongue and getting its prompt toxic effect. In the intestinal tract the direct channel for absorption is the system of capillaries; and the indirect, the lacteals of the mucous membrane; the former avenues convey the absorbed materials to the rootlets of the portal vein, while the latter pass into the lymphatics, thence into the thoracic duct, and entering the circulation, where that duct empties into the subclavian vein. The absorption of digested matter occurs by endosmosis, diffusion or filtration. Endosmosis takes place in the intestinal tract through the mucous membrane and the blood and lymph capillaries. Filtration occurs through the pores of a membrane by pressure. Diffusion needs no explanation. If digested matters enter the circulation by one of these processes, why may not the undigested as well? Let us see if they do not.

It has been conclusively demonstrated by Brücke that unchanged proteids *can* be absorbed—and absorbed even from the large intestine. Czerny and Latschenberger add their testimony in confirmation. Alcohol, tartaric, citric, malic and lactic acids introduced into the intestinal canal are found in the urine in their respective normal conditions. Metallic salts appear to be held in solution by proteids, and are probably absorbed along with them. Sulphate of iron, cyanide of potash and hydrochloric acid have been found in chyle, each retaining

its own unchanged identity: nitrate silver, after traversing the whole line from the mouth, *per vias naturales*, declares its own integrity under the skin and normally responds to light. None of these are peptones; still they have entered the circulation and in an unchanged chemical condition.

We think the evidence we have adduced is abundant to prove the absorbability of other matters than peptones and their ready entrance into the circulation. Now, do albumens in a non-assimilable state produce Bright's disease? Being non-convertible into tissue they are foreign bodies, and must be eliminated by the kidneys. Claude Bernard first demonstrated that egg-albumen introduced into the blood is excreted by the kidneys. Lehman and Stokvis have also proven the same fact by experimental investigation.

It is further established that serum-albumen also escapes along with the excretion of egg-albumen. Even when introduced by way of the stomach, egg-albumen excites albuminuria. Christison has pointed out the same truths as to proteid foods. Even in the dog the subcutaneous introduction of egg-albumen will, in a short time, produce Bright's disease. It is further conclusively established that the excretion by the kidneys of either egg or serum-albumen will, and does, produce nephritis—albuminuria—Bright's disease.

Brunton gives an account of a patient whose urine always contained albumen after eating animal food in the morning. He ascribed it to the *imperfect digestion of proteid substances* by the pancreas. The same imperfect digestion of these foods is further abundantly and repeatedly exemplified by Drs. Pavy, C. Bernard, Gubler and others—pure albumen being found in the urine.

And now to sum up:

1. We have attempted to show the normal digestion and distribution of the proteids and their entrance into the circulation in a convertible form into tissue.
2. We have adduced indisputable evidence of the capability of the entire tract to induct into the circulation other matters than proteid substances or peptones.
3. That such non-assimilables do enter and are carried into the blood by an easy and ready transit.
4. That being non-assimilable, so far as proteids are concerned, they are necessarily foreign bodies and *must be eliminated* by the kidneys in particular.
5. That albumen will not be tolerated by the kidneys without exciting nephritis—albuminuria—Bright's disease.

Mr. Hugh Blain is not prepared to accept the conclusions as deduced by Dr. Gray in the foregoing paper. He thinks

albumen the result, not the cause, of Bright's disease. He admits the physiological fact that water, salts, and fats are absorbed into the circulation without change. Indeed, Flint says nearly all soluble substances, whatever be the density of their solutions, may be taken up by the various absorbing surfaces during life. But the speaker doubts the passage of albuminoids into the circulation until changed into peptones. Egg-albumen, when injected directly into the blood, finds its way, unchanged, to the kidney for elimination where it acts as an irritant. But he does not believe it will be so absorbed when put into the alimentary canal. His observation leads him to believe that the best treatment for Bright's disease is a strictly milk diet, and he is not, therefore, inclined to think that it will also cause it.

Dr. Gray being called away at this point in the proceedings, through courtesy to him the further discussion of his paper was postponed till the next meeting.

Dr. M. D. Hoge, Jr., next discussed the question of

The Water Supply to Our Dwellings.

The attention of the doctor had been called to the importance of this subject by finding that the system of water supply in the recently constructed houses of some of his friends was extremely defective. He proceeded to explain the defects of each of the appliances most commonly in use, illustrating their mechanism by diagrams on the black-board, showing in what respect many of the apparently perfect arrangements proved to be criminally defective on closer inspection and on this account condemning *all* of the mechanical closets.

Of the automatic closets the short hopper was preferable to the long on account of its accessibility in case of choking or leakage. In summing up it was deduced that the best closet is the short hopper with rim-washout, having an S-shaped exit for sealing, with reservoir above furnishing a free rush of water to flush out the fecal matters, etc., and having a tube connecting the highest point of seal to the ventilating pipe.

Col. Cutshaw, the City Engineer, who was present by invitation to take part in this discussion, said that there was great need of appropriate legislation looking to the correction of the evils of the present system of water supply to houses. There should be an inspector of buildings appointed, whose duty it should be to enforce sanitary rules in the construction of houses. The necessity for legislation to this effect should be impressed upon the City Council by the Board of Health and the Academy of Medicine and Surgery. What we need is some system which shall effectually prevent the accumulation,

and access to the people, of fecal and sewer gases, and which will insure their rapid transmission away from the town. First of importance in this connection is a perfect closet arrangement for the houses. The typical water-closet was invented by Jennings after the Prince of Wales had an attack of fever. This is still the model closet, though it has been subsequently modified and improved. The ordinary water seal in goose neck, or S, is defective, because when the bowl is flushed out it acts as a siphon, permitting the water to be drawn out of the seal, and leaving an unobstructed channel for the return of the gases. This objection may be obviated, as has just been shown by Dr. Hoge, by the introduction of a tube from the highest point of the goose neck curve. Then have a double water seal, an under and a top seal. When the bowl and under seal are both kept full of water, it will resist ordinary gas pressure and prevent its return to contaminate the premises. Any little gas which may force by the under seal will be absorbed and neutralized by the water in the bowl. This makes the typical water-closet. The ventilating tube is essential at every goose neck—the closet, bath-tub, sink, all requiring it. After seeing that this sealing takes place, and that the gases do not return in objectionable shape, the next thing is to conduct the materials to the sea—which brings us to a consideration of *sewerage*.

The main sewer of Richmond is Schockæ Creek, which should have a paved bottom from its mouth as far up as the sewers empty into it.

This main sewer should be so constructed as to insure its contents being carried well out by the tide. The mistake in the main sewer of London was that the outfall was not sufficiently far down the Thames, and its contents returned to contaminate the water and atmosphere of the city.

The speaker next called attention to the necessity for the better *ventilation* of buildings, emphasizing the importance of this by calling attention to the imperfect ventilation of the hall of this academy, which would require an opening $7\frac{1}{2}$ feet square to permit the ingress of sufficient fresh air to supply the needs of the members present, and there should be a corresponding exit. In assembly rooms, school houses, etc., requiring the supply of an unusually large amount of pure air, in cold weather the ingress air would have to be heated, which can best be effected by passing it through coils of steam pipe beneath the ventilators. The egress air is supposed to pass out through the stacks; and this does take place in winter, the difference in temperature being sufficient to insure a draft.

But in summer, the stack of ordinary height requires some mechanical arrangement, such as a fan, to insure effective ventilation.

Diphtheria, or Follicular Tonsilitis?

Dr. C. L. Cudlipp is puzzled to know whether one of his patients has diphtheria or follicular tonsilitis. Has the constitutional symptoms of diphtheria, but he hardly thinks the secretion upon the tonsils has the consistency of a membrane.

Dr. J. S. Wellford remarked that the secretions from follicular tonsilitis involves a number of separate points corresponding to the individual follicles, while the diphtheritic membrane originates in one point, subsequently extending.

In response to an inquiry from Dr. Landon B. Edwards, as to the prevalence of diphtheria in the city, Drs. Cudlipp, Hunt, H. M. Taylor, Gordon, Parker, and others, reported cases recently occurring in their practice, and some of which are now undergoing treatment.

Dr. Edwards then remarked that this disease is now recognized as being primarily of local origin, due to the attachment on some exposed surface of bacteria coming from without. These bacteria are destroyed by bichloride of mercury and other germicides. He advised the use of bichloride, or some other spray, such as Blair's chloral thymol, where there has been, or is likely to be, exposure to diphtheria.

Authorities assert that bichloride of mercury is as certain a germicide for the prevention of diphtheria as is quinine a remedy for malaria.

Dr. J. S. Wellford is not surprised to hear of diphtheria in the city. He expects some cases of it every winter. Quotes J. Lewis Smith as saying that every case of pseudo-membranous croup is diphtheritic. Any injury to the throat increases the liability to this disease. No child reaches adult life in a large city without having had diphtheria, which explains the infrequency of diphtheria in the adult residents of cities. Trosseau says that it can only be once contracted, and the doctor agrees with him, as otherwise, every physician would eventually die from diphtheria, being subjected to repeated contact with the disease.

JAS. N. ELLIS, M. D., *Reporter.*

THE TWENTY-THIRD ANNUAL SESSION OF THE MISSISSIPPI STATE
MEDICAL ASSOCIATION.

Convened in the City of Jackson, April 16, 1890.

On roll call the following members were present: Drs. William Hills, J. L. Boskins, T. T. Beall, J. M. Bushman, H.

Baugh, P. R. Brown, G. M. D. Chester, B. L. Cally, H. L. Cammon, P. M. Cathings, F. W. Dancy, J. W. Dulaney, S. F. Dumming, L. C. Elliott, F. L. Fulgham, Frank Ferrell, W. P. Gother, J. M. Greene, F. L. Gipson, J. E. Halbert, B. E. Howard, J. F. Hunter, Wirt Johnston, C. Kendrick, B. F. Kittnell, T. P. Lockwood, M. J. Lowry, Buford Larkin, T. J. Mitchell, E. L. McGehee, L. W. Mobry, J. N. Murry, J. L. Murrell, R. D. Muller, Jas. L. Minor, M. D. Morgan, E. A. Neily, J. E. Naple, D. L. Nimocks, J. P. Porter, E. B. Poole, D. L. Phares, Geo. C. Phillips, D. H. Quin, J. H. Rhodes, S. D. Robbins, R. W. Rowland, L. Sexton, E. P. Sale, H. G. Sinclair, W. S. Sims, R. S. Toombs, T. R. Trotter, G. W. Trimble, W. E. Todd, M. J. Thompson, Geo. A. Tennison, M. H. Turner, B. A. Vaughan, John Wright, T. W. Wright, J. D. Walker, J. W. Young. Total, 65.

After roll call Dr. W. E. Todd introduced Capt. Frank Johnston who delivered a most appropriate address of welcome.

President Dr. J. E. Halbert delivered the president's address, which was timely and contained many valuable suggestions relating to sanitary medicines.

Reports of the various officers and committees showed efficient service from all. The Treasurer's report showed a balance of \$388 after defraying all expenses for the past year.

Committees appointed to memorialize the last legislature to relieve the physicians of the privilege tax of \$10 reported that they performed such duties incumbent upon them and obtained the desired relief. So henceforth no privilege license is exacted.

Bolivar County Medical Association through its secretary made application of membership. The society is composed of seventeen members, as follows: T. A. Harris, president; H. L. Sutherland, vice president; W. H. Nance, secretary; J. L. Dodge, treasurer. Members: E. G. McCauly, A. Miller, J. L. Murrell, P. A. Adams, J. O. Jones, J. L. Owen, W. E. Courson, J. W. Duke, J. C. Brooks, W. C. Miller, W. N. Alsops, I. J. Jones, J. B. Pease.

On motion the association was admitted into fellowship with this association after it adopted the code of ethics of the American Medicial Association and the Constitution and By-laws of the association. Association adjourned to meet at 3 P. M.

FIRST DAY—EVENING SESSION.

Association commenced at 3 P. M., President J. E. Halbert presiding.

Dr. M. J. Lowry, of Meridian, read a report of a surgical case (exsection of the scaphoid, the cuboid, and a portion of

the middle cuneiform bones), resulting in recovery and a very useful limb to the patient. Referred to committee on publication without discussion.

The Judicial Council recommended the following applicants for membership: Drs. S. A. Morris, S. H. Howard, J. D. Borfield, H. C. McLaurin, W. O. Porter, J. P. Baily, C. P. Conerly, W. B. Lloyd, J. H. Plunkett, J. L. Owen, J. A. Crisler, C. M. Murry. On election all were elected to membership. Dr. B. A. Vaughan, of Columbus, read a report of a case of typhoid fever in a woman six months pregnant, which eventuated in labor. The labor terminated very speedily and the child was born with the membrane unruptured—child lived 46 hours. He reported the case because it was rare for a viable child to be born with the ovoid sac unruptured.

Dr. T. F. Beall read a paper—"Report of Some Cases in Gynecological Practice;" also one on "Cartilaginous Degeneration of the Foot, with Amputation."

Discussion on Dr. Beall's Paper on "Gynecological Surgery."

Dr. Green: I would like to mention one point in Dr. Beall's paper about the silk in preference to the wire suture. I was so much pleased to hear him advocate that view that I want simply to add my deliberate judgment to his in the way of an experience, not very extensive, but which has, so far as it has gone, fully confirmed me in that opinion.

The silk suture is so much more easily applied that it does away with a great deal of the operation of preparing for the ligatures in the first place with the silver wire, and it is so much more easily brought away. There is often great injury inflicted in the operation of taking away the silver wire. I confidently believe that if antiseptic surgery is kept up it will not be long before the silver wire is abandoned.

Dr. Phillips: I would like to ask Dr. Green and Dr. Beall if they do not find a great deal more difficulty in tying the silk than in fastening the wire suture—twisting the silver wire—say in the operation of a lacerated cervix; in the position you have to be to make that knot.

Dr. Beall: No, sir; it is the simplest thing in the world. You can go down into the vagina and tie your knot just as far as your forefingers will reach. There is no comparison with the ease with which the silk can be tied compared to twisting the wire.

Dr. Phillips: Do you use a simple knot or a surgeon's knot?

Dr. Beall: The knot used in ligating arteries.

One more word while we are on that point. If you do not get your loop perfectly tight with your forceps, if you leave a little more in one point than in another, or if you do not get your twist exactly over the median line, the first thing you know it is going to twist out of its place. The long loop will be crosswise where the short loop ought to be, and then you are going to have your flaps torn wide asunder. I had this done once, and the first thing I knew there was no union there, because the silk had torn the flaps apart and held them there, and there was of course no union, and the operation was a failure.

Dr. Phillips: In applying your sutures and your silver wire you cut them off and you do not tie until you have passed all your sutures; in passing parts of the silk sutures you leave parts of the womb open. Do you ever get the ends of your silk mixed up and not get the proper one as well as you do with wire?

Dr. Beall: No sir, I generally tie one at a time.

Dr. Phillips: Do you tie them as fast as you pass them?

Dr. Beall: Yes sir.

Dr. Phillips: Doesn't it leave a very little space to pass your last suture in after you have closed your orifice as you went?

Q. Beall: No sir.

(Explanation with handkerchief.)

Dr. Green: In using the silver wire, instead of twisting it I would simply shut it; it is much more convenient and the pressure is brought to bear in a line with the suture. If you attempt to twist a silver wire in the vagina the motion of twisting is at right angles with the entrance, and that would be a trouble with the wire suture. With a probe you can press it right down and grade the pressure very well.

As I stated, in the operation, her womb or uterus is brought down with the finger and you can tie very easily with the finger.

Dr. M. J. Thompson: I have operated with the wire, silk and catgut, and I must say I prefer the wire. There is a difficulty in bringing the parts in apposition; I have no difficulty in the twisting of the wire; sometimes I can do it with my fingers, but if I fail to bring it together with my fingers, by simply twisting it, I can do it very readily with my shield; then you get rid of the objection of removing the sutures at all; they go away by absorption. I have the same trouble in removing silk sutures that I have in wire. I have very little trouble in removing the wire for the reason that I have wire made for the purpose with a little point on one of the blades that I hook

in the loop very readily, and that point prevents the uterus from being cut. I first grasp the twist of the wire with a pair of forceps and slip up the slide, and with the other hand take the shield and cut this little loop and withdraw it. In operating with catgut I have taken a list of several cases, and the number that have failed to unite, and I expect if they were all examined you would get about the same result; I have never made the same observation with the wire that I have with the catgut.

Dr. W. S. Sims, of Meridian, read a paper, "Operations for Hard Cataract, with reports of 26 cases."

On motion, referred to committee on publication. Dr. W. C. Todd read a paper written by Dr. B. A. Duncan, of West Point—"Pistol Wound of Chest—Recovery."

On motion, referred to committee on publication.

Adjourned to meet at 8:15 P. M.

FIRST DAY—NIGHT SESSION.

Association called to order at 8:15 by president.

Secretary read an invitation from Principal Graded School to visit the institution.

On motion the invitation of Prof. Brooks was accepted and a committee of seven appointed, consisting of Drs. Phillips, Trimble, Trotter, Beall, Ferrell, Lockwood and Spence, to represent the association.

Dr. E. A. Neely, of Memphis, read a paper—"The Use and the Abuse of the Plaster Paris Dressing."

DISCUSSION.

Dr. Beall: It hardly seems to me that Dr. Neely's views are confirmed by the cases brought forward. In the first case, it was doubtful if there was a fracture at all. In the second case, there was no fracture detected, and as I understand it there would have been no place for the application of any plaster to maintain immobility. It is not quite a fair arraignment, not only of the plaster of paris and age, because it is plaster of paris, but of the whole system of splinting. And I would like to ask the doctor, because he is a well-posted man, and his opportunities are very extensive, to get the benefit of his experience and observation, if his objection against the plaster of paris holds good, what substitute has he found better adapted to those cases where immobility must be maintained, or has he any specific objection against plaster of paris splinting?

Dr. Phillips: I did not intend to discuss the paper read by Dr. Neely, but simply wish to allude to a case which I have had only recently something similar to the case presented:

A gentleman stepped out of a chair, gave his ankle a wrench

and sprained it severely—right ankle: he had the same swelling, same discoloration, no dislocation or fracture as represented by the doctor, and the treatment was somewhat similar. First, the heat plan, foot immersed in very hot water, afterward similar embrocations, and the case progressed well, it terminating in about three weeks in recovery.

Dr. Trimble: I have never used plaster of paris in a sprain. It does not strike me that the doctor's cases were well selected for plaster of paris. I have had several of these ugly sprains in railroad men. Dr. Lockwood says that instead of a bandage he would draw tightly over it a porous plaster; that holds it steady and does not interfere with your embrocations at all: it is easily taken off and I find better results by treating sprains that way than any other I have ever found.

Dr. Sexton: I have had experience of several years in hospital practice and I feel like I might say something on this subject. My experience has been quite a satisfactory one. In the Charity Hospital in New Orleans in 1880 I had an Irish nurse there named Paddy, and he had a sore leg there that stood for several generations and we practised on him. There are some of the Tulane boys that will remember him. Every new student that came there they would put to bandaging that sore leg: they would bind it up with antiseptic dressings and everything, but still his leg kept sore. Finally there came a snow—something very unusual in New Orleans, the sidewalk got slippery and he fell down and broke his leg. We were using plaster paris dressing then for every fracture, and the question came up as to how in the world we were to dress Paddy's leg.

We finally struck on the plan of using antiseptic dressing, and putting a plaster bandage on that ulcer like we did on everything else. We applied a little iodoform, to that ulcer, some antiseptic cotton, and applied plaster of paris dressing on that in the usual way. We made the application on the leg while the plaster was soft, and in a month's time we removed the plaster paris, and never looked into that ulcer; it didn't matter much, it was only Paddy. I was surprised, where we had put the plaster paris on that ulcer the ulcer was entirely well; that ulcer we had been working on for fifteen years was entirely well. The plaster paris dressing aided it by excluding the air from that sore. That was very satisfactory, but quite recently I had one that was not so satisfactory. A little girl about 12 or 13 years old was brought to me and the flesh was very soft. I used and applied a plaster of paris bandage dressing after a sufficient amount of cotton to prevent the plas-

ter from pressing the muscles of the leg too much. We let that remain three weeks and then removed the plaster paris dressing, and I found we had either applied the bandage too tightly, though we thought we had padded the leg sufficiently and didn't expect any swelling, but that little leg had wasted considerably, and she naturally had a sort of hobbling gait. We brought the foot down to the ground, but the pressure of the bandage caused considerable absorption and I believe the usefulness of the leg was much impaired. That will cause absorption of the tissues, especially in a very delicate subject.

I had a young lady whose ankle was broken very much as the doctor describes there, and there was a worthy old customer who was guardian to the young lady, and I was putting on a plaster paris dressing. I always fix up my bandages before I begin, and roll them, have them all ready, and immerse them in water as I need them. I went on to fixing up this young lady's broken joint, and the old gentleman said, as he began to see it harden, he said: "Doctor, how in the devil are you ever going to get that off?" I was taking the *MEDICAL JOURNAL* at that time, and I saw where some doctor had said that all the difficulty of removing plaster paris bandages had been solved, and that no man need ever be uneasy again about getting them off, and the solution of that very serious question was to arm yourself with a bottle of nitric acid and a little glass rod, go to your subject, dip the rod in the acid and make one or two little marks on the plaster paris, and see it gradually begin to absorb, then take your scissors, cut it and take it off. I had read these articles, but never tried it, but my implicit faith in the *MEDICAL JOURNAL* bore me up. I told the old gentleman I would have no trouble in getting it off, and he said, "You will have to bring your grubbing hoe and pick axe." I told him, "I will show you how to get that off." So in a month or six weeks I went around there again to take off the plaster. I got my nitric acid and the little glass rod, and the old gentleman was there to see the miracle performed of removing that plaster without a grubbing hoe and pick axe: so I put on a very wise look, didn't tell him what I had, but I was going to remove that plaster paris. I made a scratch or two on the plaster, and didn't see it yield very readily. I got out my pen knife and it didn't seem to be getting any softer. I thought then I didn't have the right acid, but I looked and saw that I had. I made two or three more applications and it didn't have any impression. The old man was looking on and then he said: "What did I tell you about the axe and grubbing hoe?" I didn't have to use a grubbing hoe and pick axe, but I had to get out my old barlow knife and go to work.

So you see you must not put too much faith in these journals. I thank the doctor for the paper he has just read, and for his coming all the way from Memphis to join our local association.

Dr. Neely: I will say to Dr. Sexton that he can remove his plaster paris bandages, not with nitric acid, but with a little solution of caustic potash or caustic soda. It softens down the plaster and then he can cut it up with his scissors without any trouble whatever.

And now, Mr. President, as to whether I have selected two cases where the plaster bandage was demanded. I have thought that the treatment was orthodox; if you have got a sprain you want to keep it completely at rest. You have got to do that in two ways; the first is to keep the patient in bed on his back, and the second is to apply the splint. As the plaster paris, as said in my paper, is so convenient to apply and makes such a nice job, that physicians as a rule prefer to use the plaster in preference to using any other kind of splint; I know I prefer it. These are the ways. Now I contend that as physicians it is better for us to keep our patients in bed, regardless of their losing time and perhaps losing money, because as sure as you put on a plaster bandage you are going to have some stiffness left, and with any other kind of bandage you are going to have some which may remain a considerable length of time.

In the first case I doubted the existence of a fracture though my consultant contended that a fracture did exist. Anyhow I was forced to put on some kind of splint and as I had been using the plaster I adopted that. I said further in my paper that I had abandoned the use of plaster paris bandages in all these sorts of fractures where the fracture was very near an articular surface. I meant more especially a fracture of the forearm and Pott's fracture of the leg. Of course in these cases you have a callus thrown around the tendons and it complicates the case in that way.

I have never treated these cases with the plaster paris bandage without having some form of stiffness left, and always a stiffness which it took three or four years for the patient to overcome. I have had very much better success with other splints. I think any other form of splint is very much better than the plaster paris.

Dr. Beall: We want a thorough interchange of sentiment between us to-day. The objection urged to the doctor's position was that he was condemning the splint apparatus under circumstances under which I think good surgery would forbid any splinting which would involve compression of inflamed and

swelling tissues. In the first place we had a joint inflamed. No splint was necessary in that case; to keep the foot at rest could have been very well accomplished in a fracture box: in the second case there was a swelling, and I presume that those of us who may be partial to the plaster of paris splint under any circumstances would have excluded it in that case any way, because to have bound up immovably a swelling limb, we could not do that. I think his objection to a plaster splint was hardly well taken.

Dr. Sinclair read a paper which was referred to committee.

The President appointed the following committee of delegates to the American Medical Association: Drs. H. G. Sinclair, T. R. Trotter, J. Y. Murry, J. W. Dulaney, J. C. Denson.

Committee Special Medical Topics: Drs. Luther Sexton, T. P. Lockwood, A. L. Cannon, Wm. Hills, J. Y. Murry, Geo. C. Phillips.

Dr. H. G. Sinclair, Memphis, Tenn., read a very worthy contribution on Albuminuric Retinitis, which was referred to committee on publication.

Dr. P. J. McCormick, Yazoo City, read contribution on "Craniotomy."

DISCUSSION.

Dr. Beall: Allow me to say that I think this association is to be congratulated for the paper which we have just heard.

I do not know a more fitting subject of rebuke, if the word may be used, than this thing of indiscriminate resort to the perforator. The doctor's paper touches a chord undoubtedly in growth with the advancing moral and humanitarian sentiment of this age. The time will soon come, I doubt not, when the indiscriminate practice which he condemns will have been relegated to the barbarities of the past. The day was when the thing was justifiable, in a day when nothing better was known. The time of dread for entering the abdominal cavity is past forever, and, with the great strides we have taken in abdominal surgery, we know that that day will never again return. It has always struck me as a horrible thing to rashly take the life of a helpless innocent.

The operation in that as well as in many other things seems to have followed precedent day after day and generation after generation, but I have no doubt that the time has now come when we will move forward further and further away from the horrible practice which the doctor condemns.

Dr. Lockwood: I wish to say that my friend Dr. McCormick's paper does credit to the heart and the head that produced it, and I think, sir, that it must have made a serious and profound impression on the minds of this association. It is

beautifully written; it was vehemently, forcibly and gracefully read. But, sir, I must insist that my friend was a little too hard upon the older physicians who had met this difficulty before the days of antiseptic practice. In these days his arguments are probably applicable; in those days it is questionable. But that is not the worst thing that is troubling me. The most difficult portion of the article is the strictures made against the heroine, Mrs. R., for the part that she played in submitting herself to this terrible ordeal so many times. Now, sir, the question that arises is of a somewhat psychological and religious character. And, sir, I wish to ask if Mrs. R. was to blame for submitting herself so often to this danger. Besides that, did Mrs. R. play only a passive role, and was there not a man behind the screen to insist upon a repetition? And again, sir, another phase of Mrs. R.'s interesting case is: Mrs. R. was formed and moulded by the plastic hand of a guiding intelligence. Her frame was cast in a certain mould according to the designs of the originator. He must have known the wants that should attend this lady in after years. Implanted in that bosom was that peculiar sentiment that belongs to the propagation of our race: that desire that we all must feel, and which I presume would extend even to our friend, Dr. McCormick, under similar circumstances.

Further still was the life, it is true, of an innocent, and, under the doctrine of our Methodist friends, that life, that foetus was already saved. There was no guilt upon the head of that unborn innocent; and if perforce by an accident of nature that poor and beautiful life was to be remanded to the God who gave it, it is saved according to our system of salvation. But what of Mrs. R. who so persistently had violated the rules of her religion in submitting herself to this terrible ordeal so frequently? I am pleading, sir, for poor human nature and for woman. I merely make these suggestions to the gentleman.

Dr. J. C. Denson: I wish to add a little to what has been said, and in doing so the old saying—not exactly a Biblical saying, “of the two evils we shall choose the lesser.” I have been myself now practising medicine forty-three years and I have never but once seen a case that required either of these operations. I think the cæsarian operation has already been performed too often; they have performed the operation several times, when, if they had waited a short time longer, nature, with the assistance of the instruments, would have effected a delivery. So it is with craniotomy. Now, to illustrate this I will report this case. I assisted in performing craniotomy on a lady confined with her first child, possibly some twenty years ago. I had a friend who was called to see her first, and he

sent for me, and afterward sent for my brother. We made every effort that we could to deliver her with the forceps and made an entire failure. The question then arises, shall we perform the *cæsarian* operation or craniotomy? After we had decided with regard to this matter—the child we decided was already dead—she had been in labor some two or three days. We decided that the best thing under the circumstances would be to perform craniotomy, and I being the oldest physician in attendance was requested to perform the craniotomy. We did so, and applied the forceps and succeeded in delivering a child which we supposed would have weighed eighteen pounds. That lady got well, though it was possibly twelve months before she could walk, owing to the roughness of her doctors. She then moved not far from where I was located. About three or four years after that time she became pregnant again, and her husband came to see me before her confinement and told me that he desired me to attend her. He said she was in that condition again and he supposed one of these two operations had to be performed. He sent for me one morning while I was at breakfast; knowing her condition I went to see her; when I got there I found a nice healthy boy already delivered without any assistance at all, dressed and nothing for me to do.

I say it is frequently the case that craniotomy and the *cæsarian* operation are performed unnecessarily, and we ought to try to guard against this thing. I have had cases in which the patient was tired out, and so was I, and I would have given ten times my fee if she could have been delivered; and I would be trying to use the instruments, and sometimes they would slip, and possibly after a while the child would come all right without any difficulty, without the *cæsarian* operation or craniotomy either.

Dr. W. E. Todd: I have a profound respect for my friend Dr. Denson, but I fear statistics will not bear him up in his statement that the *cæsarian* operation has been resorted to so frequently. I believe in considering the lives of 100 women to be operated upon by craniotomy, they ought to take into consideration that they have 100 children to be operated upon also; consequently you have 200 lives at stake; that is so, Dr. McCormick?

Dr. McCormick: Yes, sir.

Dr. Todd: Consequently if we resort to craniotomy you sacrifice the lives of 100 children, and how many mothers die?

Dr. McCormick: Twenty-eight.

Dr. Todd: According to *cæsarian* statistics with antiseptics you have out of 200 lives that are at stake a death rate of

seventy-six; that is, we save 134 lives out of 200 by the cæsarian section. According to the improved Saenger operation, we save 175 out of 200, and they seem to think that our American results have not been good, and some writer that I read from not long since desired to eliminate the number of cases in America, and then they ran it up to 181 lives saved out of 200 lives that were at stake. Does not that seem to be a pretty good showing? But we will have to consider the indications for craniotomy. I believe that they claim that when the pelvic diameter is two and three-quarters inches or less, that craniotomy is indicated.

Dr. McCormick: Between two and three and a half inches.

Dr. Todd: Two and three quarters I believe is the extent—put it at $2\frac{1}{2}$. I believe they claim that 2.70 is the average diameter of a child's head, and put that in a pelvis with a diameter of two and three quarter inches in the majority of cases you can draw it through with the forceps, because the forceps blade will close it and contract 30-100 of an inch. This subject is one of great importance to the profession, because we rarely meet with a case, and when we do meet with one, the question naturally arises whether we are going to jeopardize both of their lives or only one. Dr. Beall, I believe, spoke of the barbarousness of craniotomy; I believe one of the explorers in the central portion of Africa found that the medicine men there resorted to the cæsarian section and delivered the women in that way. It seems that the people of the nineteenth century are just simply patterning after what occurred a long time ago. I do not think the statistics bear my friend Dr. Denson out in his view that the cæsarian section has been performed too frequently, and I believe that the only rule where craniotomy will be admissible at the present day is in a dead fœtus. I do not believe in a living child that we are justified in resorting to it.

Dr. Phillips: If I understand Dr. McCormick's paper aright, he only draws the distinction in the case of craniotomy and the cæsarian section in the case of a living child. Is that correct, doctor?

Dr. McCormick: That is correct. I have performed craniotomy myself twice during my practice, though I have never performed the cæsarian section. That would answer to a certain extent the objection of Dr. Denson that it has been performed too often. While I was opposed to it, I performed the operation of craniotomy oftener than I had the Cæsarian section, for I had never performed that at all.

Dr. Phillips: Then there comes in another objection. In

the case the doctor cites in his paper, the woman objected to the operation of the *cæsarian* section. Has she no voice in the matter?

Dr. McCormick: Yes, sir.

Dr. Phillips: He says that she was persuaded to permit the operation to be performed. Now in a case you, as the physician in attendance, can not persuade the woman to submit to the operation of the *cæsarian* section, you then permit woman and child both to die rather than to perform craniotomy upon the living child. Don't you think in that position the woman has a voice in it? Now, the idea is to get the sense of this association. Ought craniotomy be performed, under any circumstances, upon a living child? What is the physician to do under such circumstances? Would he be justifiable, the woman not consenting to the operation, to stand by and let both woman and child die?

Dr. McCormick: I will state this. When I commenced writing this paper, I soon found it would be beyond the compass of one paper to go over this entire subject. The subject is a very large one. I then came to the conclusion that I would deal with generalities, and at some future time present another paper to the association showing where craniotomy should have a legitimate place. It has a legitimate place; there is no question about that. But shall we, because the patient tells us that we can not perform the operation which we desire, and we believing conscientiously that it is the proper operation, shall that patient dictate to us the operation to be performed? Is that patient to hold our consciences? Have we the right to say which of these lives is the most valuable in the sight of God? Suppose a question of this sort had come up at the birth of Christ, and the mother was to refuse the *cæsarian* section and the perforator was plunged into the brain of the Savior? Suppose, to come down to profane individuals, Washington, or, as was said, to Cæsar, from whom the operation came to be named. Would the world have lost more by the lives of these individuals or by the lives of the mothers? And who of us has the right to kill an innocent individual? What offence has he committed?

Why should we kill him? If the mother chooses for herself and her child to die she has a perfect right to do it. I do not find fault with the woman for the performance of her proper functions, but because I do not find fault with her that is no reason why I should kill her child. I certainly have no reason to find fault with the child. She is responsible; she is an agent; she has brought it about and by what principle of law shall we destroy the child? What has it done? It is going right to heaven according to the doctor's belief, and, though

not a Methodist, I believe so too. But have we the right to kill a saint any more than a sinner? Why, not at all. It is murder either way. Why, I have seen a great many persons who, I believed, should go right straight to heaven, but at the same time it would be just as much murder to kill one of them as to kill the most wicked man in the world. I think there are a great many wicked people that ought to be put out of the way. As I said before, there is a place for craniotomy, and the argument that craniotomy ought not to be performed because it might be abused—to carry that argument out you could not do anything. There is not a thing that we do that is not abused. A great many people have eaten too much—therefore starve to death. A great many people drink too much—never drink any more. Because we have walked too much we must sit down all the time.

One of the great reasons why the mortality has been so large in the *cæsarian* section was from the fear of the operation—putting it off to the last moment.

There is a case recorded by Professor Bedford, where an intelligent physician, having a case where the pelvic diameter was two inches and a quarter, attempted to draw down the foot and deliver the child that way; used as much force as he could without dismembering the child, but failed, could not bring it down; finally he came to the conclusion that that course would be destructive to the life of the mother and child; the *cæsarian* operation was the only resource. That operation was performed and the child had not been killed; mother and child were both saved.

The *cæsarian* section has been exceedingly fatal in England and for this great reason: it is put off until the mother is nearly dead, from the dread of the operation.

Where the diameter of the pelvis is only two inches, then, even if the child be dead, it is very dangerous to perform craniotomy.

Dr. Lockwood: I hope, sir, you and the association will excuse me and indulge me just one moment.

My friend Dr. McCormick is a very forcible reasoner and sustains his point admirably well, but I can not refrain from being amused at some of his support. Now the attitude which my friend to the left here places that doctor he was speaking about was a critical one. That man was in a tight place; and the question is whether the woman in this matter has any voice or not; she is a party to the transaction and she surely has the right to assert herself in the matter? Now what will the stern physician do under such circumstances. Will he arrogate to himself the right to force his authority and perform

the operation without her consent? What kind of an attitude would my friend Dr. McCormick occupy should the woman succumb to the operation, which sometimes unfortunately happens? Who would be the murderer of two lives in this instance?

Besides the supposition that it might have been a Christ. He travels back with a rapid flight over the space of years. Let me suggest to the doctor that that wonderful transaction in the case of that wonderful individual could have eluded even the doctor's reasoning. The many occasions when that wonderful individual escaped the Jews by a wonderful process, we know nothing of, when he was in very nearly as tight a place as he was between craniotomy and the cæsarian section. Again, sir, what mother would dream that she was giving birth, by cæsarian section or otherwise, to a Washington, to found a new world or an empire, or to a Cæsar, to establish that grand dynasty that lasted so many years, to hand his name down to posterity and immortal fame? Again, I have heard it suggested, and possibly my friend Dr. McCormick has seen some cases of it in his experience in the delivery of children, you take that child and hand it back, pure and unpolluted, to him who gave it, or by cæsarian section you throw upon the world a vagabond, a thief or a murderer, and the common consent of society would be that it were better if he had never been born.

Dr. Sexton: I would like to call the attention of the association to two cases, one in which craniotomy was performed and one in which it was not performed, and then let this intelligent body draw its own conclusions. When I was a student, and before I had graduated, I was called on one night to deliver a colored woman of rather low stature and apparently in splendid health; her waist was very short and she was very closely built. Upon examining the patient I found that the pelvis was very close. I did not make any actual measurement of the diameter of the pelvis, but it afterward became unnecessary to determine this fact, which we did upon consultation. I waited—it was when I was a student of medicine and has no other case to attend to—forty-eight hours on the case. I dilated the os with my two fingers by spreading them apart; I had a very competent trained nurse to assist me in the external compression; I used ergot in moderate degree: I used quinia, I used every thing to bring about sufficient pains to force the child through, if possible. We supported the patient with nourishment and alcoholic drinks. After forty-eight hours of waiting, I determined to call upon my superiors in that service in which I was engaged to assist me in getting

through with the case. It was about 11 o'clock at night I called upon Dr. A. B. Miles—I was in the hospital service and Dr. Miles was the House Surgeon; the doctor brought an assistant surgeon. I called these gentlemen and told them what I had done, and still there was no prospect of delivery. The patient was growing weaker.

Something had to be done and quickly, too. As nearly as we could approximate it then we determined the diameter of the pelvis; antero-posterior diameter inside to be two and a half inches, and the lateral diameter was not inside of three and a half, as well as I can remember. As a matter of course, I turned the case over to them; I took the chloroform; the patient was put on the table and thoroughly anæsthetized. They tried to bring down the foot of the child and deliver it in that way. As a matter of course, after such hard pains we supposed the child was dead. But during the attempt at turning the movement of the child was felt by the doctors and by the mother. Then the case was presented to two of the most competent surgeons in the South, a pelvis whose diameter was too small to admit of the delivery of the child, and also a patient who must be relieved of that child. There, in a hospital with every instrument and appliance that was necessary, antiseptics, sprays and solutions, etc., with all the assistance of trained nurses which any man could have in a well regulated hospital, these two men quailed under the cæsarian section and performed craniotomy. Well do I remember their discussion about the matter; they brought up all these points. What was this matter of opening the abdominal walls. It would have been apparently a mild operation, as all the doctors in this discussion have said; not only the abdominal cavity has to be opened, but the womb; not only a natural womb, but an unnatural womb, with the blood supply increased and the danger from hemorrhage increased.

In this case these gentlemen, although they had good reason to believe the child was living, and with all the advantages which a well regulated hospital could give them, decided that craniotomy was the proper operation, and they proceeded to perform it. While the cæsarian section is a most difficult operation, I assure you that craniotomy is not an easy one. With that woman thoroughly anæsthetized, with two nurses to keep the legs flexed on the abdomen, and with two competent surgeons there to mutilate the child, we consumed at least two hours and a half in delivering her by the craniotomy operation. I will state in the subsequent treatment of that case all possible precautions were taken; vaginal injections; she had the closest attention, her temperature never raised beyond 103, and she made a splendid recovery.

Now I will state another case where craniotomy was not performed. About six months ago in the town of Wesson was the saddest funeral I ever witnessed. A young minister of the gospel had come to my town and married one of our most beautiful young ladies; he was sent into the interior of the country, and this young girl became pregnant. In due process of time labor came on. I do not know who her physician was, but from rumors I learned she was in labor four days and nights, ceaseless agony, ceaseless toil. At the end of that time she expired. And if you will contrast the feeling of that young man as he walked away about a year previous with a blushing bride, and as he returned to the church with the corpse, yea, I may say a double corpse, a woman undelivered, you can see the great contrast of the operation as performed and the operation as not performed.

Dr. Murry: I am too tired to speak at length on the subject, but simply wish to express my gratitude that it has been brought up for discussion, and to express my individual thanks to the author of the paper. But I want to defend the profession against the remarks of Dr. Denson when he said the cæsarian operation had been performed by members of our profession with a view to making a reputation.

Dr. Denson: Yes, sir, I have no doubt but that it has been done.

Dr. Murry: I beg your pardon for differing from you, but I can not think a member of the medical profession would be guilty of such a grave blunder. I hardly think it was warranted with my idea of the rectitude of the members of this profession. And then again, the author of the paper; I think he was a little harsh when he compared the perforator with the stiletto of the assassin. Now I think with Dr. Sexton, in a great many cases craniotomy is performed judiciously and well. I have had some experience with it myself. I am satisfied in some cases, where I have operated and assisted in operating, the mother was saved by it and could not have been otherwise. I never consented to undertake that operation until I believed, until I was thoroughly satisfied, the child was dead. But I am gratified, I am truly glad that the day is gone, that the profession is waking up to the difference and great importance of the Cæsarian section as compared with craniotomy.

Dr. McCormick: I believe, in accordance with all parliamentary law, I have the right to rise to a question of privilege and of explaining and correcting. I think, perhaps, I was misunderstood in regard to one expression. I did not say, nor did I intend to say, that a man who would conscientiously, and perhaps in accordance with the great body of the profession in

the United States and Europe, plunge a perforator into the head of a living child, that he did it wantonly: but I said and meant that who did it wantonly and without sufficient consideration, that that man who was so careless and wanton was capable of plunging the stiletto under the mantle of night.

Dr. Ayles: Dr. McCormick remarked in the course of his paper or discussion, one or the other, that there was no law to prohibit the taking of the life of a fœtus previous to quickening. If that is the case, it seems to me that something ought to be done, and that speedily, to remedy this defect.

[Continued next month.]

EDITORIAL ARTICLES.

THE HOMOEOPATHIC CORN.

It will be remembered that a bill was introduced in our last Legislature providing for the creation of a State Board of Medical Examiners, the members of which were to be appointed by the Governor, and whose chief duty was to look to it that physicians desiring to practise medicine in Louisiana should possess proper qualifications for the same. This bill was intentionally framed in such a way as to include all schools of medicine regardless of therapeutics, so that homœopath, allopath, hydropath, electropath and omnipath, possessing the diplomas of respectable schools, and the requisite amount of information upon a very limited number of medical branches, should be able to appear before this board and demand without let the privileges of medical practice in the State.

This bill was endorsed by prominent members of the State Medical Society and by the Orleans Parish Medical Society as a body, as calculated to improve the tone of medical practitioners and raise the standard of medical education. It was printed in full in the pages of this journal (see June number, 1890), and its main provisions heartily approved at the time by our staff, for we were only repeating views which had often been previously urged in these pages.

As far as we are aware there was nothing subtle or ambiguous about the wording of the proposed legislative enact-

ment—it was *pro bono publico*, for the improvement of the status of medical men in general, and for the protection of the public against charlatanism, quackery and imposition. It seemed to us that no intelligent physician now practising medicine anywhere in Louisiana, under any special title, or dissenting *pathy*, could find a flaw with the intention and main provisions of this act, known as House Bill No. 172. Such, as far as we could ascertain, was also the impression of the majority of both branches of the Legislature, for the bill passed smoothly through the House of Representatives, and, with some changes, was about to pass the Senate, when, lo! a few of our homœopathic brothers got together and talked themselves into such a state of indignation and righteous wrath as to cause them to dispatch a communication to the Legislature, dubbing the advocates of the bill (members of the State Medical Society and the Parish Society of Orleans) a set of “conceited physicians of the city of New Orleans,” who “dictate to their equals, and even their seniors.”

And so it came about that the first feeble effort made in many years toward the betterment of medical practice in Louisiana had trod on homœopathic toes. These few memorialists caused a stampede. The country was threatened by an invisible enemy; it was class legislation; and the poor, unsuspecting bill, clad in the white flower of its brief and blameless life, was assassinated before it even knew itself to be an object of suspicion.

What was the reason for all this?

We have sought of late for comments in homœopathic journals, and our search has been abundantly rewarded. In one number there were three editorials on the same subject, all jubilant over homœopathic triumph; but the reason for it all remains obscure.

In return for the flattering epithets applied to the majority of progressive physicians throughout the State, we have no rejoinder; the memorial speaks for itself, and the indulgence in personalities but ill becomes the pages of a decent journal.

What was the reason for this uncalled-for action, sudden and violent, by our brothers of the infinitesimal dose? It is possible that homœopathy is opposed to a higher education of

medical men; afraid of a law that exacts knowledge as something more important than theory? Does it show the belief that the study of disease as an entity is more important than observation of its fractional constituent symptoms? Or was it offended pride which aroused in our confreres of the saccharine pellet the reactionary spirit of the proverbial canine, who could not eat the straw, and determined that therefore others should be debarred from tasting?

In what way, then, has the unsuspected corn on the tender homœopathic toe been trod upon?

CARE OF LEPERS IN THE UNITED STATES AND ELSEWHERE.

In the course of an editorial on leprosy in New South Wales, the *Australian Medical Gazette*, of Sydney, Australia, says: "It is singular that in all English-speaking countries leprosy is attracting unusual attention at the present time. A sensation was caused by the mention of a case occurring in a man employed in the London meat market; and in New York equal attention was aroused recently by the case of a youth, a native of Central America, who had been sent to that city to school. On the discovery of his disease he was forcibly removed, by the order of the New York Board of Health, to North Brothers' Island for isolation. Leprosy is not new in the United States, for, in addition to two cases forcibly confined by the Philadelphia Board of Health, in 1888, another one was similarly treated in St. Louis, Missouri. It has been present for many years in Florida, amongst the West Indians settled there, as well as amongst the Acadian descendants in Louisiana; there are Norwegian lepers in Minnesota, whilst there is a community in which lepers are common in New Brunswick, where the disease has been in existence for over a century."

The editorial from which the above is taken was written in connection with a bill to control leprosy in New South Wales. In that part of Australia four persons, at least, of pure European descent have been attacked by the disease. While this is not regarded as reason for alarm, still it is deemed advisable that the health authorities should have legal power to isolate cases of leprosy if, in the general interest, it is found desirable.

It is highly probable that it will soon be found desirable to take measures to prevent the spread of the disease. In India, according to the *British Medical Journal*, the government contemplates removing all lepers in the colony to some at present uninhabited island in the Indian Ocean. In the years 1851 to 1881, the number of lepers increased at the rate of thirty thousand every ten years; and it is supposed that in the last decennium the rate of increase has been even greater. Wherever leprosy gains a foothold among people plunged in ignorance and careless of their hygienic surroundings it remains and spreads. India, Australia, China and some parts of the Americas, furnish the conditions favorable to the maintenance of the disease. Leprosy will not stamp itself out. In California, the large number of Chinamen living in closely crowded rooms, always furnish a leper contingent. The Eleventh Biennial Report of the State Board of Health of California contains two highly interesting papers on leprosy, one by Dr. H. S. Orme, President of the Board, and the other by Dr. Wolfred Nelson of New York. After glancing at the state of leprosy in all parts of the world, Dr. Orme reviews the measures taken for preventing the spread of the disease; these comprise isolation and hygiene. California, according to Dr. Orme, is far in advance of the other States of the Union in laws for the control of leprosy.

No one knows, according to Dr. Orme, the full extent of this pestilence. It retains a foothold in all quarters of the globe. In Asia and Africa it still holds undisputed sway, and in the new world it shows itself in a manner to make thoughtful people feel uneasy. In some places, as Charleston and New Orleans, "alarming numbers occasionally come to light. Just now the point most threatened is New Orleans, for no legal barrier stands to protect the great city which, after a long and dreadful struggle, has lately gained the mastery of tropical yellow fever by quarantine. The successful method of Ulloa and Miro is forgotten or unheeded by the authorities, and must be rediscovered to save the people from the fate of the Hawaiians. Here in California the enemy, few and scattered, is in our midst, and others are liable to come on every ship from China and the (Sandwich) Islands; but we have been fully warned, and are armed with lawful weapons."

What other weapon is required? In Dr. Orme's opinion, a State hospital for lepers is needed. The statutes enable local authorities to act for themselves, "but not one of the counties has a suitable lazaretto." In San Francisco, where about half of California's lepers are congregated, these unfortunates are accommodated in the small-pox hospital; only one leper has thus far contracted small-pox. It has been suggested that a contract be made with the Hawaiian Government to care for California's lepers at the Molokai leper settlement; but a better plan, according to Dr. Orme, would be to utilize one of the small islands near San Francisco, on which accommodations for one hundred lepers could be provided, and that would be enough for all present and prospective needs. * * * "In Louisiana there is imperative need of such an institution and of legislation equivalent to the act of California. * * * I would not be understood as encouraging any alarm on this subject, even in Louisiana or California. Our State needs only faithful enforcement of existing laws, with a suitable lazaretto, while Louisiana would be saved by a revival of the forgotten plan of Miro, which was successfully in operation just a century ago."

The problem of suppressing leprosy is not one with which only Louisiana has to deal. At the last session of our State Legislature a well prepared bill was introduced, read and referred to a committee—and it still nestles comfortably in a pigeon-hole in the committee room. That something must be done is evident. The history of the past shows us what to do. Governments have had enough experience to furnish us with materials necessary to provide suitably for lepers.

A very satisfactory way of managing lepers is practised in Venezuela. Mr. E. H. Plumacher, Consul at Maracaibo, has, according to the *New York Medical Record*, recently made a report to the State Department at Washington upon leprosy in that South American Republic. An island four miles from Maracaibo has been set apart for the isolation of the incurables. A suitable building has been provided for them, and another for the attendants. To those who have sufficient means to build cottages, land is given. Waterworks have been provided, furnishing not only a sufficient supply for cleanliness of persons

and quarters, but also sufficient for the irrigation of the land devoted to agriculture. A means of employment is thus provided for those able to work and desiring occupation. The island has been artificially stocked with game, and a reading room, library, chapel and occasional musical entertainments are provided. Marriages between diseased and healthy persons are prohibited, but sound wives have been allowed to accompany diseased husbands, and have lived with them through the last stages of the disease; and daughters have accompanied mothers, and cared for them to the end, and have then returned to the world, where they have continued to live healthy mothers of healthy families. For the sake of the moral discipline of the settlement, and under the belief that such unions prove fruitless, marriages have been permitted between diseased persons. Two children, however, have been born of such marriages, but up to the present time neither of them has shown any of the manifestations of leprosy; and one of them, having reached the age of 14 years, and having lived with his leprous parents all his life, has been pronounced clean, and has been allowed to return to the world.

VIRCHOW'S SEVENTIETH BIRTHDAY.

A printed circular in German, received from Dr. R. Matas, informs us that on October 31, 1891, Rudolf Virchow will celebrate his seventieth birthday.

A movement has been started by his ardent admirers to commemorate this birthday in a fitting manner. It is proposed that a handsome gold portrait medal, 108 millimeters in diameter, be presented to the great author of the *Cellular Pathology*.

It is also proposed that a bronze copy of the medal be presented to each member of Virchow's family, and, if the means permit, to each one of the scientific institutions represented.

In order to defray the expenses incident to the celebration, the committee in charge calls upon all admirers of Virchow and his labors to contribute what they wish. American physicians desiring to contribute to the fund may forward their contributions to Dr. John S. Billings, U. S. A., Washington, D. C.

A report of the disposition of the fund will be made to the

contributors. If there should be a surplus left after defraying the expenses of the celebration, it will be delivered to Virchow for the purpose of establishing or strengthening some scientific institution.

It is needless to recount Virchow's services to medical science. He has placed all generations of medical men under a lasting obligation, and his name will live as long as medicine exists.

We sincerely hope that our country will not be slow to respond to the call issued by the committee; on the contrary, we confidently anticipate a prompt and substantial proof of the great esteem in which Virchow is held by American physicians, and of the appreciation of the services rendered by one of the great lights of modern medicine.

ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

MEDICINE.

THE RATIONALE OF INFLUENZA.

The following remarks by Dr. Laffont, Professor of Therapeutics of the Faculty of Medicine of Lille, will be read with interest: "The epidemic which was such a cruel scourge last winter is again appearing, although up to the present in a milder form. It may, therefore, not be without use to consider at the present moment the most rational treatment of this affection, at all times painful, and sometimes, from its complications, serious. This malady is, I consider, a contagious catarrhal affection, in its milder form known to us as "grippe," but from its recent serious epidemic character christened "influenza," a name it will probably retain henceforth. The symptoms of this complaint are manifested invariably by a functional depression, more or less marked, of the whole system, varying from simple lassitude, stuffiness of the nose and slight gastric obstruction, all premonitory symptoms of a large number of contagious diseases, and fortunately often constituting the only symptoms of the malady, which in such cases passes for ordinary "grippe."

In the late epidemic, to these premonitory symptoms succeeded all the characteristics of grave typhoid infection: nausea,

fever, muscular pains, delirium, pneumonia, with tendency to suffocation and complete prostration. In the discussions at societies and in medical journals on its etiology, some described it as a simple catarrhal affection, more or less grave, having for cause the influence of the external conditions of the atmosphere, and denied its contagious character, others sought at once for the microbe. In the midst of these etiological discussions no therapeutic law was propounded, and the medical journals were advocating here aperient medicine, antithermics: there, the Vin Mariani (made from the coca of Peru) and tonic medicines; elsewhere, counter-irritation and balsamics were said to do wonders; almost everywhere was admitted the specific effect of sulphate of quinine, or still better salts of quinine, above all, antipyrin. From my own experience, based upon a great number of cases and on myself in particular, I have no hesitation to assert that the method which succeeded the best was essentially eclectic. Thus, at its first manifestation I was able to arrest the development of the disease by administering an aperient (oleum ricini by preference), then causing thoracic revulsion by rubefaction, or even vesication, and by provoking simultaneously a non-depressing diaphoresis, easily obtained by administering several times in the day a grog made from Vin Mariani, one-third wine and two-thirds water, very hot, with sugar, such as has been prescribed by the learned laryngologist Fauvel for hoarseness and loss of voice, "a frigore."

In the presence of influenza in the stage when the patient was completely depressed, very far from ordering antipyrin, which only augments the depression, I found it much more effectual to administer strong tonics, such as generous wines, champagne, whisky, rum, cognac, tonics physical and moral, such as the preparations of Coca Mariani. Vin and Elixir, at the same time causing revulsion, and administering repeated aperients. From this treatment I rapidly cured myself, and observed the same results in patients without that long and tedious convalescence due, as I think, to the weakness caused by the use of antipyrin.

I advise, then, as a rational treatment for influenza and kindred affections: first, gentle purgatives; second, diaphoretics and revulsives; third, strong tonics.—*The Medical Press and Circular, London, November 19, 1890.*

NEW YORK PASTEUR INSTITUTE.

Under date of October 15, 1890, Dr. Paul Gibier, Director of the New York Pasteur Institute, reports the results of the preventive inoculations against hydrophobia performed at this Institute since its opening (February 18, 1890).

To date 610 persons, having been bitten by dogs or cats, came to be treated. These patients may be divided in two categories:

1. For 480 of these persons it was demonstrated that the animals which attacked them were not mad. Consequently the patients were sent back after having had their wounds attended, during the proper length of time, when it was necessary. Four hundred patients of this series were consulted or treated gratis.

2. In 130 cases the anti-hydrophobic treatment was applied, hydrophobia having been demonstrated by veterinary examination of the animals which inflicted bites or by the inoculation in the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs. *All these persons are to-day enjoying good health.* In 80 cases the patients received the treatment free of charge.

The persons treated were: 64 from New York; 3 from Pennsylvania; 1 from Ohio; 12 from New Jersey; 2 from New Hampshire; 1 from Arizona; 12 from Massachusetts; 2 from Georgia; 1 from Iowa; 8 from Connecticut; 2 from Texas; 1 from Nebraska; 9 from Illinois; 1 from Maryland; 1 from Arkansas; 3 from Missouri; 1 from Maine; 1 from Louisiana; 3 from North Carolina; 1 from Kentucky; 1 from Ontario (Can.)

THE INOCULATION METHOD OF TREATING TUBERCULOUS DISEASE.

By PROF. DR. ROBERT KOCH, Berlin.

INTRODUCTION.

In an address delivered before the International Medical Congress I mentioned a remedy which conferred on the animals experimented on an immunity against inoculation with the tubercle bacillus, and which arrests tuberculous disease. Investigations have now been carried out on human patients, and these form the subject of the following observations:

It was originally my intention to complete the research, and especially to gain sufficient experience regarding the application of the remedy in practice, and its production on a large scale, before publishing anything on the subject. But, in spite of all precautions, too many accounts have reached the public, and that in an exaggerated and distorted form, so that it seems imperative, in order to prevent all false impressions, to give at

once a review of the position of the subject at the present stage of the inquiry. It is true that this review can, under these circumstances, be only brief, and must leave open many important questions.

The investigations have been carried on under my direction by Dr. A. Libbertz and Stabsarzt Dr. E. Pfuhl, and are still in progress. Patients were placed at my disposal by Professor Brieger from his Poliklinik, Dr. W. Levy from his private surgical clinic, Geheimrath Dr. Fräntzel and Oberstabsarzt Köhler from the Charité Hospital, and Geheimrath v. Bergmann from the Surgical Clinic of the University. To all these gentlemen, and to their assistants, I wish here to express my deep-felt thanks for the active interest which they took in the matter, and for their self-sacrificing readiness to help me. Without this many-sided coöperation it would not have been possible to have pushed this difficult and responsible research so far forward in a few months.

NATURE AND PHYSICAL CHARACTERS OF THE REMEDY.*

As regards the origin and the preparation of the remedy, I am unable to make any statement, as my research is not yet concluded; I reserve this for a future communication. The remedy is a brownish transparent liquid, which does not require special care to prevent decomposition. For use, this fluid must be more or less diluted, and the dilutions are liable to decomposition if prepared with distilled water; bacterial growths soon develop in them, and become turbid, and are then unfit for use. To prevent this the diluted liquid must be sterilized by heat and preserved under a cotton-wool stopper; or more conveniently prepared with $\frac{1}{2}$ per cent. solution of phenol.

MANNER OF USING THE REMEDY.

It would seem, however, that the effect is weakened both by frequent heating and by mixture with phenol solution, and I have therefore always made use of freshly prepared solutions. Introduced into the stomach the remedy has no effect: in order to obtain a reliable effect it must be injected subcutaneously. For this purpose we have used exclusively the small syringe suggested by me for bacteriological work; it is furnished with a small india-rubber ball, and has no piston. This syringe can easily be kept aseptic by absolute alcohol, and to this we attribute the fact that not a single

* Doctors wishing to make investigations with the remedy at present can obtain it from Dr. A. Libbertz, Lueneburger Strasse, 28, Berlin, N. W., who has undertaken the preparation of the remedy, with my own and Dr. Pfuhl's coöperation. But I must remark that the quantity prepared at present is but small, and that larger quantities will not be obtainable for some weeks.

abscess has been observed in the course of more than a thousand subcutaneous injections. The place chosen for the injection—after several trials of other places—was the skin of the back between the shoulder-blades and the lumbar region, because here the injection led to the least local reaction—generally none at all—and was almost painless.

EFFECT OF INJECTIONS IN HEALTHY INDIVIDUALS.

As regards the effect of the remedy on the human patient, it was clear from the beginning of the research that in one very important point the human being reacts to the remedy differently from the animal generally used in experiments—the guinea pig—a new proof for the experimenter of the all-important law that experiment on animals is not conclusive for the human being; for the human patient proved extraordinarily more sensitive than the guinea pig as regards the effect of the remedy. A healthy guinea pig will bear two cubic centimeters, and even more, of the liquid injected subcutaneously without being sensibly affected; but in the case of a full-grown, healthy man, 0.25 cubic centimeter suffices to produce an intense effect. Calculated by body weight, the 1,500th part of the quantity which has no appreciable effect on the guinea pig acts powerfully on the human being. The symptoms arising from an injection of 0.25 cubic centimeter I have observed after an injection made in my own upper arm. They were briefly as follows: Three or four hours after the injection there came on pains in the limbs, fatigue, inclination to cough, difficulty in breathing, which speedily increased. In the fifth hour an unusually violent attack of ague followed, which lasted almost an hour. At the same time there was sickness, vomiting, and rise of body temperature, up to 39.6 deg. C. After twelve hours all these symptoms abated. The temperature fell, until next day it was normal, and a feeling of fatigue and pain in the limbs continued for a few days, and for exactly the same period of time the site of injection remained slightly painful and red. The lowest limit of the effect of the remedy for a healthy human being is about 0.01 cubic centimeter (equal to 1 cubic centimeter of the hundredth solution), as has been proved by numerous experiments. When this dose was used, reaction in most people showed itself only by slight pains in the limbs and transient fatigue. A few showed a slight rise of temperature up to about 38 deg. C. Although the dosage of the remedy shows a great difference between animals and human beings—calculated by body weight—in some other qualities there is much similarity between them. The most important of these qualities is the specific action of the remedy on tuberculous processes of whatever kind.

THE SPECIFIC ACTION ON TUBERCULOUS PROCESSES.

I will not here describe this action as regards animals used for experiment, but I will at once turn to its extraordinary action on tuberculous human beings. The healthy human being reacts either not at all or scarcely at all—as we have seen when 0.01 cubic centimeter is used. The same holds good with regard to patients suffering from diseases other than tuberculosis, as repeated experiments have proved. But the case is very different when the disease is tuberculosis; the same dose of 0.01 cubic centimeter, injected subcutaneously into the tuberculous patient, caused a severe general reaction, as well as a local one. (I gave children aged from 2 to 5 years one-tenth of this dose, that is to say, 0.001 cubic centimeter; very delicate children only 0.0005 cubic centimeter; and obtained powerful, but in no way dangerous, reaction.) The general reaction consists in an attack of fever, which, generally beginning with rigors, raises the temperature above 39 deg., often up to 40 deg., and even 41 deg. C.; this is accompanied by pain in the limbs, coughing, great fatigue, often sickness and vomiting. In several cases a slight icteric discoloration was observed, and occasionally an eruption like measles on the chest and neck. The attack usually begins four to five hours after the injection, and lasts from twelve to fifteen hours. Occasionally it begins later, and then runs its course with less intensity. The patients are very little affected by the attack, and as soon as it is over feel comparatively well, generally better than before it. The local reaction can be best observed in cases where the tuberculous affection is visible; for instance, in cases of lupus; here changes take place which show the specific anti-tuberculous action of the remedy to a most surprising degree. A few hours after an injection into the skin of the back, that is, in a spot far removed from the diseased spots on the face, etc., the lupus spots begin to swell and to redden, and this they generally do before the initial rigor. During the fever swelling and redness increase, and may finally reach a high degree, so that the lupus tissue becomes brownish and necrotic in places. Where the lupus was sharply defined we sometimes found a much swollen and brownish spot, surrounded by a whitish edge almost a centimeter wide, which again was surrounded by a broad band of bright red.

After the subsidence of the fever the swelling of the lupus tissue decreases gradually, and disappears in about two or three days. The lupus spots themselves are then covered by a crust of serum, which filters outward and dries in the air; they

change to crusts, which fall off after two or three weeks, and which, sometimes after one injection only, leave a clean red cicatrix behind. Generally, however, several injections are required for the complete removal of the lupus tissue. But of this more later on. I must mention, as a point of special importance, that the changes described are exactly confined to the parts of the skin affected with lupus. Even the smallest nodules, and those most deeply hidden in the lupus tissue, go through the process, and become visible in consequence of the swelling and change of color, while the tissue itself, in which the lupus changes have entirely ceased, remains unchanged. The observation of a lupus case treated by the remedy is so instructive, and is necessarily so convincing, that those who wish to make a trial of the remedy should, if at all possible, begin with a case of lupus.

THE LOCAL AND GENERAL REACTION TO THE REMEDY.

The specific action of the remedy in these cases is less striking, but is perceptible to eye and touch, as are the local reactions in cases of tuberculosis of the glands, bones, joints, etc. In these cases swelling, increased sensibility, and redness of the superficial parts are observed. The reaction of the internal organs, especially of the lungs, is not at once apparent unless the increased cough and expectoration of consumptive patients after the first injections be considered as pointing to a local reaction. In these cases the general reaction is dominant; nevertheless, we are justified in assuming that here, too, changes take place similar to those seen in lupus cases.

THE DIAGNOSTIC VALUE OF THE METHOD.

The symptoms of reaction above described occurred without exception in all cases where a tuberculous process was present in the organism, after a dose of 0.01 cubic centimeter, and I think I am justified in saying that the remedy will therefore in future form an indispensable *aid* to diagnosis. By its aid we shall be able to diagnose doubtful cases of phthisis; for instance, cases in which it is impossible to obtain certainty as to the nature of the disease by the discovery of bacilli or elastic fibers in the sputum, or by physical examination. Affections of the glands, latent tuberculosis of bone, doubtful cases of tuberculosis of the skin, and such like cases, will be easily and with certainty recognized. In cases of tuberculosis of the lungs or joints which have become apparently cured we shall be able to make sure whether the disease has really finished its course, and whether there be not still some diseased spots from which it might again arise, as a flame from a spark hidden by ashes.

THE CURATIVE EFFECT OF THE REMEDY.

Of much greater importance, however, than its diagnostic use is the therapeutic effect of the remedy. In the description of the changes which a subcutaneous injection of the remedy produces in portions of skin changed by lupus, I mentioned that after the subsidence of the swelling and decrease of redness the lupus tissue does not return to its original condition, but that it is destroyed to a greater or less extent, and disappears. Observation shows that in some parts this result is brought about by the diseased tissue becoming necrotic even after one sufficient injection, and at a later stage it is thrown off as a dead mass. In other parts a disappearance, or, as it were, a melting of the tissues, seems to occur, and in such case the injection must be repeated to complete the cure.

ITS ACTION ON TUBERCULOUS TISSUE.

In what way this process occurs can not as yet be said with certainty, as the necessary histological investigations are not complete. But so much is certain, that there is no question of a destruction of the tubercle bacilli in the tissues, but only that the tissue enclosing the tubercle bacilli is affected by the remedy. Beyond this there is, as is shown by the visible swelling and redness, considerable disturbance of the circulation, and, evidently in connection therewith, deeply seated changes in its nutrition which cause the tissue to die off more or less quickly and deeply, according to the extent of the action of the remedy.

To recapitulate, the remedy does not kill the tubercle bacilli, but the tuberculous tissue; and this gives us clearly and definitely the limit that bounds the action of the remedy. It can only influence living tuberculous tissue; it has no effect on dead tissue, as, for instance, necrotic cheesy masses, necrotic bones, etc., nor has it any effect on tissue made necrotic by the remedy itself. In such masses of dead tissue living tubercle bacilli may possibly still be present, and are either thrown off with the necrosed tissue, or may possibly enter the neighboring still living tissue, under certain circumstances. If the therapeutic activity of the remedy is to be rendered as fruitful as possible, this peculiarity in its mode of action must be carefully observed. In the first instance, the living tuberculous tissue must be caused to undergo necrosis, and then everything must be done to remove the dead tissue as soon as possible, as, for instance, by surgical interference. Where this is not possible, and the organism can only help itself in throwing off the tissue slowly, the endangered living tissue must be protected from fresh incursions of the parasites by continuous application of the remedy.

THE DOSE.

The fact that the remedy makes tuberculous tissue necrotic and acts only on living tissue, helps to explain another peculiar characteristic thereof, namely, that it can be given in rapidly increasing doses. At first sight, this phenomenon would seem to point to the establishment of tolerance, but since it is found that the dose can, in the course of about three weeks, be increased to five hundred times the original amount, tolerance can no longer be accepted as an explanation, as we know of nothing analogous to such a rapid and complete adaptation to an extremely active remedy. The phenomenon must rather be explained in this way, that in the beginning of the treatment there is a good deal of tuberculous living tissue, and that consequently a small amount of the active principle suffices to cause a strong reaction; but by each injection a certain amount of the tissue capable of reaction disappears, and then comparatively larger doses are necessary to produce the same amount of reaction as before. Within certain limits a certain degree of habituation may be perceived.

As soon as the tuberculous patient has been treated with increasing doses for so long that the point is reached when his reaction is as feeble as that of a non-tuberculous patient, then it may be assumed that all tuberculous tissue is destroyed. And then the treatment will only have to be continued by slowly increasing doses and with interruptions, in order that the patient may be protected from fresh infection while bacilli are still present in the organism.

Whether this conception and the inferences that follow from it be correct the future must show. They were conclusive, as far as I am concerned, in determining the mode of treatment by the remedy, which, in our investigations, took the following form.

THE TREATMENT APPLIED TO LUPUS.

To begin with the simplest case, lupus; in nearly every one of these cases I injected the full dose of 0.01 cubic centimeter from the first. I then allowed the reaction to come to an end entirely, and then, after a week or two, again injected 0.01 cubic centimeter, continuing in the same way until the reaction became weaker and weaker and then ceased. In two cases of facial lupus the lupus spots were thus brought to complete cicatrization by three or four injections; the other lupus cases improved in proportion to the duration of treatment. All these patients had been sufferers for many years, having been previously treated unsuccessfully by various therapeutic methods.

THE TREATMENT APPLIED TO TUBERCULOSIS OF THE BONES
AND JOINTS.

Glandular, bone and joint tuberculosis was similarly treated, large doses at long intervals being made use of: the result was the same as in the lupus cases—a speedy cure in recent and slight cases, slow improvement in severe cases.

THE TREATMENT APPLIED TO PHTHISIS.

Circumstances were somewhat different in phthysical patients, who constituted the largest number of our patients. Patients with decided pulmonary tuberculosis are much more sensitive to the remedy than those with surgical tuberculous affections. We were obliged to lower the dose for the phthysical patients, and found that they almost all reacted strongly to 0.002 cubic centimeter, and even to 0.001 cubic centimeter. From this first small dose it became possible to rise more or less quickly to the same amount as is well borne by other patients.

Our course was generally as follows: An injection of 0.001 cubic centimeter was first given to the phthysical patient; on this a rise of temperature followed, the same dose being repeated once a day until no reaction could be observed. We then rose to 0.02 cubic centimeter until this was borne without reaction, and so on, rising by 0.001, or at most 0.002 to 0.01 cubic centimeter and more. This mild course seemed to me imperative in cases where there was great debility. By this mode of treatment the patient can be brought to bear large doses of the remedy with scarcely a rise of temperature. But patients of greater strength were treated from the first partly with larger doses, partly with rapidly repeated doses. Here it seemed that the beneficial results were more quickly obtained.

The action of the remedy in cases of phthisis generally showed itself as follows: Cough and expectoration generally increased a little after the first injection, then grew less and less, and in the most favorable cases entirely disappeared; the expectoration also lost its purulent character and became mucous.

As a rule, the number of bacilli only decreased when the expectoration began to present a mucous appearance; they then from time to time disappeared entirely, but were again observed occasionally until expectoration ceased completely. Simultaneously the night sweats ceased, the patients' appearance improved, and they increased in weight. Within four to six weeks patients under treatment for the first stage of phthisis were all free from every symptom of disease, and might be pronounced cured. Patients with cavities not yet too highly developed improved considerably, and were almost cured:

only in those whose lungs contained many large cavities could no improvement be proved objectively, though even in these cases the expectoration decreased, and the subjective condition improved. These experiences led me to suppose that phthisis in the beginning can be cured with certainty by this remedy.*

EFFECT IN ADVANCED CASES OF PHTHISIS.

In part this may be assumed for other cases when not too far advanced; but patients with large cavities, who almost all suffer from complications caused, for instance, by the incursion of other pus-forming micro-organisms into the cavities, or by incurable pathological changes in other organs, will probably only obtain lasting benefit from the remedy in exceptional cases. Even such patients, however, were benefited for a time. This seems to prove that in their cases, too, the original tuberculous disease is influenced by the remedy in the same manner as in other cases, but that we are unable to remove the necrotic masses of tissue with the secondary suppuration processes.

The thought suggests itself involuntarily that relief might possibly be brought to many of these severely afflicted patients by a combination of this new therapeutic method with surgical operations (such as the operation for empyema), or with other curative methods. And here I would earnestly warn people against a conventional and indiscriminate application of the remedy in all cases of tuberculosis. The treatment will probably be quite simple in cases where the beginning of phthisis and simple surgical cases are concerned; but in all other forms of tuberculosis medical art must have full sway by careful individualization, and making use of all other auxiliary methods to assist the action of the remedy. In many cases I had the decided impression that the careful nursing bestowed on the patient had a considerable influence on the result of the treatment, and I am in favor of applying the remedy in proper sanatoria, as opposed to treatment at home and in the outpatient room.† How far the methods of treatment already recognized as curative—such as mountain climate, fresh air treatment, special diet, etc.—may be profitably combined with the new treatment, can not yet be definitely stated, but I believe that these therapeutic methods will also be highly advantageous when combined with the new treat-

*This sentence requires limitation in so far as at present no conclusive experience can possibly be brought forward to prove whether the cure is lasting. Relapses naturally may occur; but it can be assumed that they may be cured as easily and quickly as the first attack. On the other hand, it seems possible that, as in other infectious diseases, patients once cured may retain their immunity. This, too, must for the present remain an open question.

†As regards tuberculosis of brain, larynx, and miliary tuberculosis, we had too little material at our disposal to gain proper experience.

ment in many cases, especially in the convalescent stage. The most important point to be observed in the new treatment is its early application. The proper subjects for treatment are patients in the initial stage of phthisis, for in them the curative action can be most fully shown, and for this reason, too, it can not be too seriously pointed out that practitioners must in future be more than ever alive to the importance of diagnosing phthisis in as early a stage as possible. Up to the present, the proof of tubercle bacilli in the sputum was considered more as an interesting point of secondary importance, which, though it made diagnosis more certain, could not help the patient in any way, and which, in consequence, was often neglected. This I have lately repeatedly had occasion to observe in numerous cases of phthisis which had generally gone through the hands of several doctors without any examination of the sputum having been made. In future this must be changed.

A doctor who shall neglect to diagnose phthisis in its earliest stage by all methods at his command, especially by examining the sputum, will be guilty of the most serious neglect of his patient, whose life may depend on this diagnosis and the specific treatment at once applied in consequence thereof. In doubtful cases medical practitioners must make sure of the presence or absence of tuberculosis, and then only the new therapeutic method will become a blessing to suffering humanity when all cases of tuberculosis are treated in their earliest stage, and we no longer meet with neglected serious cases forming an inextinguishable source of fresh infections. Finally, I would remark that I have purposely omitted statistical accounts and descriptions of individual cases, because the medical men who furnished us with patients for our investigations have themselves decided to publish the description of their cases, and I wished my account to be as objective as possible, leaving to them all that is purely personal.—*Medical News, November 15, 1890.*

LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY.

In Charge of DR. A. W. DE ROALDES.

PRIMARY CHANCRE OF THE TONSIL.

The tonsils are oftener than is generally believed the seat of primary syphilitic chancre.

Dr. Besnier mentions the case of a patient, affected with roseola, the true nature of which was overlooked by several physicians from the fact that they had failed to find the seat of

the primary accident; a closer observation led to the diagnosis of chancre of the tonsil, originating in the use of a pipe belonging to a syphilitic friend. Analogous facts are common enough, adds Dr. Besnier, to attract our attention wherever the origin of the syphilitic infection is obscure. The primary accident being apt to last quite a time, it may happen that upon examining the throat (and we are wrong in not always doing so in all cases of a suspicious eruption) we may discover a characteristic lesion.—*Clinical Conferences, by Dr. Ernest Besnier, Hôpital St. Louis, Paris Journal de Médecine et de Chirurgie pratiques, November 1890.*

URTICARIA OF THE TONGUE.

Dr. Bock relates the following case: P., 38 years of age, has been subject for several years to frequent attacks of urticaria, which appeared either spontaneously or after eating clams. Dr. Bock was called in June 11, 1889. The patient was in bed; his face was slightly cyanosed; his breathing was very much embarrassed, the inspiration being very harsh and the expiration prolonged, as if caused by œdema of the glottis. He could not articulate a single word. Upon opening the mouth, the tongue was found swollen to the extent of filling the oral cavity, the patient being almost completely unable to protrude it beyond the teeth; of a bluish color; it was bright, almost shiny; the papillæ and blood vessels were no longer to be seen, and the general appearance was one of marked œdema. The consistence was hard, elastic, with a sensation of pain and burning, but no abnormal heat.

The attack had begun half an hour before, and had in a few moments reached a maximum of severity; no bite, no sting, nor traumatism, could explain this rapid appearance. The rapidity with which œdema developed, the absence of traumatism, the peculiar appearance of the tongue, which seemed to be congealed, and the knowledge of repeated previous attacks of urticaria, led to the diagnosis of lingual urticaria with the supposition of accompanying œdema of the glottis.

Dr. Bock prescribed a hot mustard foot bath and injected hypodermically one-half milligramme of atropia. The condition of the patient improved gradually, and in two hours respiration had become much easier. All swelling of the tongue had disappeared at the end of the day.

Observations of urticaria attacking mucous surfaces are exceedingly rare. Kaposi mentions the mucous membrane of the mouth, pharynx and epiglottis as the seat of patches of

urticaria, apt to develop symptoms of asphyxia, but acute urticaria of the whole tongue has not yet been reported.—*Union Médicale*, November 6, 1890.

BLOODLESS TONSILLOTOMY.

Prof. J. Toison, of Lille (*Revue de Thérapeutique Médico-Chirurgicale*, October 1), discusses the various methods of reducing or removing the tonsils. He begins by saying that excision of the tonsils with the bistoury or the guillotine is gradually losing favor among surgeons on account of the risk of hemorrhage. Ignipuncture with the thermo-cautery or galvano-cautery is often useful, but should be reserved for cases in which the tonsils are only moderately enlarged and can be sufficiently reduced in one or two sittings, and for cases in which some anomaly of shape in the hypertrophied glands makes it difficult to remove them with a cutting instrument. For ordinary cases, Prof. Toison uses a new snare of his own invention, which, according to him, effectually obviates all danger of bleeding. The apparatus consists of a *serre-nœud*, the metallic loop of which, instead of being free, is fixed by three silk threads to a blunt ring fixed to the distal end of the instrument. The ring is passed over the tonsil, which is then seized with forceps; the wire loop is next pulled home in the usual way, the traction being sufficient to snap the silk threads which fix it temporarily to the ring. The tonsil is thus cut through without bleeding. Prof. Toison has performed this operation several times since last April; in no case has there been any hemorrhage.—*British Medical Journal*; *Brit. Journal of Dental Science*.

OBSERVATION ON THE USE OF AIR SLIGHTLY IMPREGNATED WITH CHLOROFORM.

[Dr. Stackler, in *Bull. gen. de Thérapeutique*, October 10, 1890.]

Stackler observed, in connection with J. Bang, that an oil laden with chloroform or some other volatile substance strongly retains it and only very slowly gives it up to a stream of air passing through the liquid. One hundred cubic centimeters of oil and one centimeter of pure chloroform are put into a wash-bottle; by means of a pair of bellows, a stream of air is forced through this chloroformed oil, and the patient inhales the air. In this manner, volatile antiseptics can be introduced into the bronchi; and they are well borne. In gangrene of the lung and in tuberculosis remarkable results have been noted.—*Deutsche Medizinal-Zeitung*.

THE ACTION OF KOCH'S REMEDY IN LARYNGEAL TUBERCULOSIS.

[Dr. Hertel, in the Deutsche Med. Wochenschrift.]

Hertel states that, up to the time of his report, eighteen cases had been treated with Koch's remedy. He used a 1 per cent. solution of Koch's remedy in a 5 per cent. solution of carbolic acid. The injections were made with Koch's syringe. In the first two patients, the injections were made into the skin of the back between the shoulder blades; in the others, in the lumbar region, as the injection between the shoulder blades caused pain upon lying down during the fever. No noteworthy local reaction was observed at the point of injection. The points were sensitive only on the first day. The syringes and needles were disinfected with absolute alcohol, as recommended by Koch, and the neighborhood of the injection rendered surgically clean.

In fourteen of the cases, the diagnosis was confirmed by finding tubercle bacilli in the sputum; in three, it was not possible to confirm the diagnosis in this manner, because of the lack of sputum: but the presence of lupus nodules and the physical examination of the lungs rendered the diagnosis almost certain.

In the remaining patients, the injections were made as a test (on probation).

The eighteen cases may be divided into four groups. First, those in which no laryngeal lesion was perceptible before treatment, but in which morbid foci were afterward revealed: second, those in which changes, probably of a tubercular nature, were visible in the larynx were seen, and undergoing further alteration under treatment; third, those suffering from tubercular disease of the larynx, which retrograded during the treatment, and in which new and previously unnoticed foci of disease were brought out by the treatment: the fourth group embraces those cases in which scarcely any general reaction, and no local reaction in the larynx, was observed.

The observations gave the following results:

The treatment with Koch's fluid brings to view all tubercular foci in the larynx, so far as they may be seen in the laryngoscopic mirror.

After the injection of a few milligrams, a local reaction appears, with a more or less marked general reaction, after a longer or shorter time.

The local reaction could be observed with the laryngeal mirror. This consists at first in redness and swelling of the diseased tissue. In the course of twenty-four hours after the

injection, the reddened and swollen tissue changes its color. It usually becomes covered with a grayish white coating from the middle outward, while the outer zone still remains red, and a disintegration usually begins at the center. A funnel-shaped ulcer usually forms, the center of which corresponds to the center of the diseased focus. The disintegration spreads from the center to the circumference; the edges of the ulcer usually become grayish white, and, while no true loss of substance from the surface can be observed, the ulcer becomes smoother and smoother. The whole of the diseased tissue seems to shrink, and at the same time there is a more or less abundant secretion of mucus and fluid from the mouth and throat.

A complete cure has not yet been observed, on account of the shortness of the time during which the patients have been under observation, though there was steady improvement and relief from the local symptoms.—*Deutsche Medizinal-Zeitung*.

DERMATOLOGY AND HYGIENE.

In Charge of DR. HY. WM. BLANC.

PSORIASIS TREATED WITH MERCURY.

Mapother, of London, remarks: There are many reasons to believe that psoriasis is a parasitic disease, and not an inherited one. Not infrequently it is of epiphytic nature, the parasite being disseminated by the blood, and very often in a symmetrical manner. All the drugs which have been employed with success, internally or externally, in the treatment of psoriasis are parasitocides, and mercury is by far the most efficacious, relapses being very uncommon after its prolonged use. I usually treat hospital patients with frictions of mercurial ointment, and private patients with the white precipitate ointment, prescribing, in addition, the blue pill, or a pill of the protoiodide.

I require this treatment to be continued for about eight weeks, and the eruption disappears the greater part of the time within six weeks.

In cases of psoriasis consisting of small isolated plaques. I employ other local applications.

A diet less rich in nitrogen, and above all in the hulls of cereals, diminishes the production of keratin, which forms so abundantly in this malady.—*Annales de Dermatologie et de Syphiligraphie*.

CREMATION AT MILAN.

Two systems of cremation are followed at Milan, by one of which the body is burned in a furnace surrounded by wood and charcoal, while by the other the combustion is brought about through a number of jets of gas which cast their heat upon the furnace from all sides. When wood and charcoal are employed, as stated in the *Medical Record*, about six hundred pounds of wood and one of charcoal are found necessary, and the process lasts two hours. When gas is used, all that is consumable in the body is burned up in less than fifty minutes. The body may, in ordinary cases, be introduced into the furnace with or without the coffin; but if death has been caused by some infectious disease, the coffin and body must be burned together. The weight of the remains after cremation, in the form of bones and dust, is about four pounds. They are in color pure white, tinged here and there with a delicate pink; and it is a rule never to touch them with the hand. The bones, and vestiges of bones (which are for the most part burned into powder) are taken up with silver tongs, while the ashes are removed from the furnace with a silver shovel, to be placed on a silver dish, and then deposited in an urn for retention in the cinerarium. Here the ashes are preserved in separate compartments, each with a suitable inscription beneath it. The cost of cremation is \$5 to a member of the Society for Extending Cremation in Italy, or \$10 in the case of non-members.—*Science*.

CREMATION THE SOLE REMEDY AGAINST INFECTION.

Thouvenet, before the Section on Hygiene, of the French Association for the Advancement of Science (La Semaine Médicale), maintained that the present outbreak of cholera in Spain was due to the exhuming of the bodies of the victims of the epidemic of 1885. He regards cemeteries as vast depots of infection for the pollution of air and water with pathogenic germs, and the sole remedy for this condition lies in cremation. In conclusion, he proposed the construction of crematories in cities and villages, and the making of cremation compulsory in cases of death from infectious diseases. He invited the Section to approve his conclusions, but they decided that for the present it was unwise to make any change in the law, as it probably could not be enforced. They strongly *advised* cremation in infectious diseases.—*Four. of Amer. Med. Assn.*

CONTAGION FROM DIPHTHERIA PROLONGED AFTER
SYMPTOMS HAVE DISAPPEARED.

In a recent memoir, Messrs. Roux and Yersin have given the results of their researches upon a point of considerable importance—the duration of the existence of diphtheritic bacilli in the mouth after the disappearance of the false membranes.

This is a question of which the solution is of great interest to medical men, and will notably facilitate the discussion which has been raised in our Medico-Chirurgical Society on the duration of the contagiousness of infectious diseases. It has been shown by the experiments of some French *savants*, which exactly repeat those of Lœffler, that the diphtheritic virus sometimes remains in the mouth several days after the cure of a case is complete.

The conclusions from this are easily drawn: persons who have diphtheria should not reappear too soon in the family circle, the place of business, or in the school.

It is well not to dismiss hospital patients as soon as the false membrane disappears, and as it is inconvenient to watch them in the general wards, it would be prudent to keep them in the diphtheria department of the place reserved for convalescents, where they would be submitted to the use of antiseptic throat washes for several days longer.

With reference to this, Messrs. Roux and Yersin insist, with great reason, on the importance of only giving complete freedom to persons who have had diphtheria when it has been made certain, by repeated cultivations, that they have no more specific bacilli in the mouth.

It is impossible to state precisely how long the bacilli remain living in the buccal cavity, as this varies with the individual.

The precautions called for by the French authors are not directed toward an imaginary danger, for every practitioner will be able to cite epidemics of diphtheria spread by children who had had the disease some time before.

This persistence of the bacilli in the mouth is probably the cause of relapses, which are not uncommon, and which manifest themselves by a chilly sensation or any cause bringing about alteration of the mucous membrane and permitting a fresh multiplication of bacilli and a reproduction of the disease.

Roux and Yersin have likewise studied the preservation of the diphtheria virus outside of the organism, and have found that objects shut up where the air can not be renewed, and away from sunlight and moisture, remain dangerous a long time.

It has been proven that pseudo membranes thus preserved have retained their virulent bacilli after five months of desiccation.

If similar false membranes had fallen on a coverlet, mattress or the floor, they would have been for a prolonged period dangerous to those exposed to the dust of the apartment in which they were.

In the moist state the virus is destroyed by a temperature of 58 degrees (C) lasting several minutes. *Boiling water is always sufficient to disinfect the linen and other objects soiled by diphtheritic products.*

But the dry virus supports, without perishing, a temperature of 98 degrees prolonged more than an hour. This resistance of dried virus to the different modes of destruction explains the persistence of diphtheria in certain localities, and causes it to be understood why the institution of "pavilions of isolation" has not sufficed to suppress the ward cases of certain hospitals. For the disinfection of the linen, the garments and the bedding, furnaces of vapor under pressure are particularly convenient.

It is well known what beautiful results have been obtained at the *Enfants assistés*, by Dr. Sevestre, since he has required all objects which have been in contact with diphtheria cases to be passed through the heating furnace. This simple practice has almost caused a complete disappearance of the ward cases, formerly so numerous in this establishment.

It is necessary to place in the heating furnace, not only the clothes of the diphtheritic children, but also the covering in which they were brought to the hospital. The measures which have succeeded at the hospital ought to be applied in private practice to patients similarly affected.

Sanitary regulations can do much toward causing the disappearance of diphtheria, but what would be still more efficacious is a change in the habits of the population, which is not sufficiently informed on the necessity for disinfecting objects soiled by the sick people.

"If every physician," say Messrs. Roux and Yersin, "exerted himself to persuade the families of the sick to send the clothes and bed linen to the disinfecting furnace, many cases of diphtheria would be prevented; *but in order to convince others it is necessary that the physician himself should be convinced.*"—*Annales de la Soc. Medico-Chirurg. de Liege.*

BOOK REVIEWS AND NOTICES.

Saunders' Pocket Medical Lexicon. Being a dictionary of words and terms used in medicine and surgery. Collated from the highest authorities and brought up to present date. By John M. Keating, M. D. (University of Pennsylvania), Fellow College of Physicians of Philadelphia, etc., and Henry Hamilton, author of "A New Translation of Virgil's *Æneid* into English Rhyme." Philadelphia: W. B. Saunders, 913 Walnut Street, 1890.

About the size of an ordinary dose book, this lexicon of medical terms can be easily carried about by the student from lecture to lecture. Designed for rapid reference, it replaces the ponderous all-embracing lexicon of the doctor's library, and defines, briefly and concisely, most of the words that the medical student is ordinarily confronted with. H. W. B.

A Dictionary of Practical Medicine. By various writers. Edited by James Kingstore Fowler, M. A., M. D., F. R. C. S., etc. Philadelphia: P. Blakiston, Son & Co. 1890. [New Orleans: Armand Hawkins, 194 Canal Street. Cloth, \$5; half morocco, \$6.]

This dictionary is a concise work on practical medicine, arranged in the form most suitable for ready reference. Surgical subjects are not considered, but diseases peculiar to women are included in the book.

The busy practitioner frequently finds himself in a position where he would like to review or enlarge his practical knowledge in a perplexing case. Dr. Fowler's work is intended precisely to meet such emergencies. The matter is eminently practical: it is up to date: and it is so arranged that the seeker after knowledge loses no time in finding just what he wants. The variations introduced in the arrangement of the matter from the plan usually followed in the compilation of such works are such as to render reference easier. Particular stress is, of course, laid upon treatment: and, in giving the treatment, the contributors are not content with vaguely referring to the fact that such and such a remedy has been found useful in the disease under consideration, but they state the doses and best methods of administration, which are precisely the points that a busy man desires to ascertain when he is in need of information.

These features of the work will, we feel sure, commend it to busy physicians everywhere.

The list of contributors to Dr. Fowler's dictionary contains the names of men able in their line of work. Among them, we take great pleasure in observing the name of Dr. Dawson Williams, who for many months furnished the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* with its valuable London correspondence.

A. McS.

MEDICAL ITEMS.

A DESERVED COMPLIMENT.

Dr. Benjamin Ward Richardson, F. R. S., of London, England, has dedicated the sixth volume of his original work, "The Asclepiad," to Dr. Joseph Jones, of New Orleans, La., in the following words:

"To Joseph Jones, M. D., Professor of Chemistry and Clinical Medicine in the Tulane University of Louisiana:

"A model student of medicine, always seeking, always finding, always imparting, with unwearied industry, new and useful knowledge to the great Republic of Medicine, Science and Art, this, the sixth volume of the 'Asclepiad,' is sincerely dedicated."—*Journal of the American Medical Association*.

THE MATTISON PRIZE.

OPIUM ADDICTION AS RELATED TO RENAL DISEASE.

A Prize of Four Hundred Dollars.

With the object of advancing scientific study and settling a now mooted question, Dr. J. B. Mattison, of Brooklyn, offers a prize of \$400 for the best paper on "Opium Addiction as Related to Renal Disease," based upon these queries:

Will the habitual use of opium, in any form, produce organic renal disease?

If so, what lesion is most likely?

What is the rationale?

The contest is to be open for two years from December 1, 1890, to either sex, and any school or language.

The prize paper is to belong to the American Association for the Cure of Inebriety, and be published in a New York medical journal, *Brooklyn Medical Journal* and *Journal of Inebriety*.

Other papers presented are to be published in some leading medical journal, as their authors may select.

All papers are to be in possession of the chairman of award committee on or before January 1, 1893.

The committee of award will consist of Dr. Alfred L. Loomis, President New York Academy of Medicine, chairman; Drs. H. F. Formad, Philadelphia; Ezra H. Wilson, Brooklyn; Geo. F. Shrady, and Jos. H. Raymond, editor *Brooklyn Medical Journal*.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about \$180, will be made on July 14, 1891. Essays intended for competition may be upon any subject in medicine, and must be received by the secretary of the college on or before May 1, 1891.

CHARLES W. DULLES, *Secretary*.

OFFICIAL LIST

OF THE CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDED MAY 22, 1890.

- Fessenden, C. S. D., Surgeon. Granted leave of absence for fourteen days, November 22, 1890.
- Austin, H. W., Surgeon. Detailed as chairman Board of Medical Officers to convene in Washington, D. C., December 1, 1890, November 19, 1890.
- Irwin, Fairfax, Surgeon. Detailed as member of Board of Medical Officers, to convene in Washington, D. C., December 1, 1890, November 19, 1890.
- Kingman, J. J., Assistant Surgeon. Detailed as recorder of Board of Medical Officers, to convene in Washington, D. C., December 1, 1890, November 19, 1890.
- Woodward, R. M., Assistant Surgeon. Granted leave of absence for fourteen days, November 21, 1890.
- Condict, A. W., Assistant Surgeon. To proceed to Cairo, Ill., for temporary duty, November 19, 1890.
- Stimpson, W. G., Assistant Surgeon. To proceed to Cape Charles Quarantine for temporary duty, November 20, 1890.

PROMOTION.

Kingman, J. J., Passed Assistant Surgeon. Commissioned as Passed Assistant Surgeon by the President, November 21, 1890.

APPOINTMENT.

Cofer, L. E., Assistant Surgeon. Commissioned as Assistant Surgeon by the President, November 21, 1890.

MORTUARY REPORT OF NEW ORLEANS.

FOR NOVEMBER, 1890.

CAUSE.	White	Colored	Male	Female	Adults	Children	Total
Fever, Yellow							
“ Malarial (unclassified)	3	2	4	1	3	2	5
“ Intermittent	2		2		2		2
“ Remittent	3	2	3	2	4	1	5
“ Congestive	3	2	3	2	3	2	5
“ Typho-Malarial	2	2	1	3	2	2	4
“ Typhoid or Enteric		1	1			1	1
“ Puerperal		1		1	1		1
Scarlatina							
Small-pox							
Measles							
Diphtheria	4		1	3		4	4
Whooping Cough	2	1	1	2		3	3
Meningitis	5		1	4		5	5
Pneumonia	22	25	31	16	26	21	47
Bronchitis	8	10	9	9	3	15	18
Consumption	50	33	48	35	81	2	83
Cancer	13	4	5	12	17		17
Congestion of Brain	11	4	6	9	10	5	15
Bright's Disease (Nephritis)	19	8	18	9	26	1	27
Diarrhœa (Enteritis)	21	13	18	16	17	17	34
Cholera Infantum	15	4	11	8		19	19
Dysentery	6	3	7	2	9		9
Debility, General	5		4	1	5		5
“ Senile	18	20	21	17	38		38
“ Infantile	11	3	7	7		14	14
All other causes	198	97	154	141	191	104	295
TOTAL	421	235	356	300	438	218	656

Still-born Children—White, 29; colored, 20; total, 49.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 27.28; colored, 40.58; total, 30.99.

DIPHTHERIA RECORD FOR NOVEMBER, 1890.

District.	CASES.			District.	DEATHS.		
	White.	Colored.	Total.		White.	Colored.	Total.
1	3		3	1	2		2
2	4		4	2	1		1
3	1		1	3	1		1
4	2		2	4			
5	1		1	5			
6	1		1	6			
7		1		7			
	12	1	13		4		4

No Scarlatina reported during the month.

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—NOVEMBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in hundredths..	SUMMARY.
	Mean	Max.	Min.		
1	54	62	46	0	Mean barometer, 30.156.
2	62	75	50	0	Highest barometer, 30.361, 22d.
3	55	58	52	0	Lowest barometer, 29.993, 14th.
4	53	62	44	0	Mean temperature, 64.0.
5	58	71	45	0	Highest temperature, 81, 15th; lowest, 44, 4th.
6	65	74	56	0	Greatest daily range of temperature, 26, —th.
7	65	71	59	0.03	Least daily range of temperature, 6, —th.
8	69	76	62	T	MEAN TEMPERATURE FOR THIS MONTH IN—
9	72	80	64	T	1871.....60.1 1876.....59.1 1881.....61.2 1886.....59.1
10	70	78	62	0	1872.....57.1 1877.....58.2 1882.....62.8 1887.....61.1
11	68	77	58	0	1873.....61.1 1878.....60.7 1883.....63.5 1888.....59.1
12	72	80	64	0	1874.....63.0 1879.....64.9 1884.....59.7 1889.....58.7
13	66	72	59	0	1875.....65.5 1880.....50.3 1885.....59.7 1890.....64.0
14	66	74	58	0	Total deficiency in temp'ture during month, 96.
15	74	81	66	.22	Total excess in temp'ture since Jan 1, 418.
16	74	77	71	.10	Prevailing direction of wind, N. E.
17	74	78	69	.07	Total movement of wind, 6123 miles.
18	69	74	64	0	Extreme velocity of wind, direction, and date, 30 miles, S. E., 17th
19	66	72	60	0	Total precipitation, 0.42 inches.
20	60	67	54	0	Number of days on which .01 inch or more of precipitation fell, 4.
21	62	72	53	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN—
22	64	72	56	0	1871.....7.14 1876.....4.35 1881.....7.24 1886.....5.33
23	62	72	53	0	1872.....7.43 1877.....6.58 1882.....1.98 1887.....0.52
24	64	73	56	0	1873.....5.95 1878.....7.78 1883.....6.36 1888.....1.50
25	66	73	58	0	1874.....1.12 1879.....3.79 1884.....3.13 1889.....2.18
26	66	71	61	0	1875.....6.79 1880.....6.04 1885.....3.47 1890.....0.42
27	58	64	53	0	Total deficiency in precip'n during month, 4.75.
28	54	60	47	0	Total deficiency in precip'n since Jan. 1, 18.89.
29	57	66	48	0	Number of clear days, 18; partly cloudy days, 7; cloudy days, 5.
30	56	67	46	0	Date of Frosts, light, 4th.
					Mean maximum temperature, 71.6.
					Mean minimum temperature, 56.5.
					Dates of thunder storms, none.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, *Sergeant, Signal Corps Observer.*

PUBLISHERS'



DEPARTMENT.

Address all communications to L. GRAHAM & SON, Mgrs. Bus. Dept., 99 to 103 Gravier St., New Orleans.

The New Orleans Medical and Surgical Journal.

Subscription, Three Dollars per annum, in advance.

Advertisements, as per Printed Schedule mailed to applicants.

NEW SERIES:
Whole No. 313.

JANUARY, 1891.

VOL. XVIII.
No. 7.

NEW ADVERTISEMENTS IN THIS ISSUE.

	PAGE.		PAGE.
Mellin's Infants Food	1	Ford's Digestive Tablets	27
Maltine	8	Baker's Breakfast Cocoa	28
Swain's Rectal Instruments	18	University of Wooster, Medical Dept.	31
Peacock's Bromides	22		

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Arlington Chemical Co	12	Pomeroy Truss Co	28
Baltimore Medical College	16	Planten's Capsules	13
Battle & Co	11	Robinson-Pettet Co	2
Bellevue Hospital Medical College	18	Sanitarium—Sunny Side	16
Boehringer & Soehne	10	"Sanitas" Antiseptics, etc.	1
Bowden Lithia Springs Co	23	Schieffelin & Co., W. H.	3
Celerina	19	Sharp & Dohme	14
Cerebro-Spinant— I. O. Woodruff & Co.	21	Tarrant & Co	15
Claudel, Optician	39	Tasteless Quinine	13
Cook, Gus	18	The New Orleans Polyclinic	26
Diobiburnia	25	The Wm S. Merrell Chemical Co	9
Health Restorative Co	4	The R. Hyde Co	22
Herrick Uterine Supporter	18	Victor Safe and Lock Co	24
Kentucky School of Medicine	16	Wagner Medical Manufacturing Co	7
Marchand's Peroxide of Hydrogen	28	Wheeler's Tissue Phosphates	13
Mariani & Co	7		
Martin's Vaccine Virus	16		
McDermott, A	13		
Medical Dep't of the Tulane University	13		
Moore-McGregor Medication	10		
New York Medical Journal	17		
N. Y. Pharmaceutical Co	6		
N. Y. Post-Graduate Medical College	20		

COVER.

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

PUBLISHERS' NOTES.

BOWDEN LITHIA WATER—under seal—by the gallon. Doctor, try it.

MEDICAL PRACTICES and drug stores bought and sold. Partnerships arranged. Assistants and substitutes provided. Particulars free. Address, The Medical Transfer Bureau, Lynn, Mass.

HE WHO assists the physician benefits the race. Use Georgia Bromine Lithia Water, Doctor.

A HAPPY NEW YEAR.

To assist and protect at the birth of a new life is the physician's noblest work. What that life may be in after years he can not tell; to its bodily ills he can minister, even with earnest hopes for improvement and permanent good.

To be in health and competency at the birth of a new year is a privilege worth high esteem. What that year will be none of us can tell. Each can contribute his mite toward its prosperity and happiness, with the earnest hope that it will be happy and prosperous for all.

It is a high privilege and pleasure to be in a position where one's salutation is not confined by the limited circle of personal acquaintances. And it is this privilege and pleasure that the publishers of the JOURNAL assume in extending to all its patrons—to all its readers—to the profession—to all—A HAPPY NEW YEAR.

DOCTOR, have you tried the famous Bowden Lithia Water?

"ROBINSON'S LIME JUICE AND PEPSIN" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page 2, this issue.)

DR. C. E. RUPONT, of Grahamville, S. C., writes: FEBRICIDE has proven of great benefit to the patient I tried it on; it was a case of Malarial Toxæmia, attended with Intercostal Neuralgia, which alarmed the patient, an old lady, exceedingly. The pills acted well and quickly, as heretofore; it usually took me ten days at least to relieve her of an attack, but this time she was up on the fourth day and wanted to go on a visit.

A. W. MACFARLANE, Fellow Royal College Physicians, Edinburgh; Fellow Royal Medical and Chirurgical Society of London; Examiner in Med. Jurisprudence in the University of Glasgow; Honorary Consulting Phys. (late physician) Kilmarnock Infirmary; formerly Examiner in Medicine and Clinical Medicine in the University of Glasgow, etc., in his monograph, "Insomnia and its Therapeutics," says:

"Bromidia (Battle) has in several instances been found reliable, in drachm doses, given in syrup and water at intervals of an hour until sleep is induced."—*Woods' Med. and Surg. Monographs, Sept. 1890.*

THE ADULTERATION and cheapening of articles of food in this country are becoming alarming, and we therefore point with pride to the record of Walter Baker & Co.'s preparations, which have for over 100 years maintained their integrity of manufacture and absolute purity of product. It is a distinctive characteristic of W. Baker & Co.'s Breakfast Cocoa that no chemicals are used in its preparation, it being produced from the finest cocoa seeds by scientific mechanical processes only, and for this reason it is unequaled in purity, as well as unexcelled in solubility by any other cocoa in the market. It is healthful, nourishing, agreeable and economical, and the best drink in the world for young and old, rich and poor, the invalid and the robust.

231 JACKSON ST., New Orleans, La., December 7, 1889.

Having for years used the Hayden's Viburnum Compound, I give with pleasure a few words in its favor. In all the time I have prescribed it, I have always had the Compound give relief, and without any unpleasant after effects.

MRS. ANNIE T. L. THOMAS, M. D.

SANDER & SONS' EUCALYPTI EXTRACT (EUCALYPTOL).—Whenever mention is made of "Oil of Eucalyptus," we beg you to bear in mind that such reference applies to our preparation styled for distinction, "Eucalypti Extract (Eucalyptol):" there being manufactured besides our preparation, the wholesale price of which is \$8 per dozen ounce bottles, no oil exclusively produced from the leaves. Other oils of Eucalyptus found in the market—worth about 10 cents an ounce—are common terebinthinous products of no medicinal value. A test will at once convince; the difference is too striking, and allows of no mistake. To avoid disappointment, we would suggest to specify, when prescribing, our manufacture. Samples *gratis* through Dr. Sander, Dillon, Iowa. Meyer Bros. Drug Co. St. Louis, Mo., Sole Agents.

HYSTERIA.—

R. Tinct. castorei..... ½ oz.
 Tinct. Valerian..... 1½ oz.
 Aletris cordial [Rio]..... .6 oz.

M. Sig. Teaspoonful four times daily.

"THE attention of the profession is respectfully called to the advertisement of Dr. C. Swain, of this city. His case of instruments seem to be all that could be desired for the successful treatment of the several diseases of the rectum, and we take pleasure in presenting anything that we think the profession will appreciate and that will assist them in the proper treatment of the diseases of this heretofore neglected organ."—*Memphis Medical Monthly*.

We have pleasure in reproducing the above and call the attention of our readers to Dr. Swain's advertisement on page 18.

THE PEACOCK CHEMICAL CO., of St. Louis, present in an advertisement on page 22 of this issue their claims for consideration from those who are interested in the preparation of reliable and trustworthy chemical products. It is unnecessary for us to do more than call attention to the productions of this concern—its well-earned reputation for honest, high grade work, being too well established to need any further commendation.

NASHVILLE, Tenn., March 17, 1890.

I have much pleasure in adding my testimony to the value of Hayden's Viburnum Compound as a Uterine tonic and nervine. Not only have I found it efficacious in womb ailments in the non-gravid state, but given for two or three weeks before the end of the term of gestation, it will, in many cases of a high, nervous development, prevent much of the ordinary suffering of parturition.

J. BUNYAN STEPHENS, M. D.

Professor of Obstetrics and Clinical Midwifery, Nashville Medical College.

S. A. McMURRAY, M. D., Marion, Ohio, says: I used ALETIS CORDIAL with very good results, in the case of Mrs. —, aged 23. Since the birth of her child, five years ago, she has been in a very poor state of health. At the time I saw her she was very much reduced. She also, since the birth of her child, had suffered with dysmenorrhea of a most severe type, the pain beginning three or four days before the appearance of the menstrual flow and lasting until one or two days after, its appearance being so severe as to confine her to her bed. She was also very nervous, had not much appetite, and did not sleep well. I ordered one teaspoonful of ALETIS CORDIAL, three times daily, beginning one week before the appearance of the menstrual flow, and continuing for two weeks, then to discontinue its use until a week before the next period. In conjunction she also took one teaspoonful of celerina, one hour after each meal, as I thought it would be beneficial on account of her nervous condition. I began to notice improvement in a short time, and at the next menstrual period there was little pain. From that time on there was marked improvement, until at the end of two months she was free from pain at the catamenial periods. The nervous phenomena improved, as did also her appetite, until she is now, according to statement made me yesterday, in better health than she has been for six years.

MEDICINAL PREPARATIONS, like Cæsar's wife, should be above suspicion. To all conscientious manufacturers of articles so fraught with weal or woe as are many of our established proprietary articles, the merest incident that tends to unjustly put discredit on their brands is a matter of the gravest importance and consideration. Messrs. TARRANT & Co. are taking particular pains to eradicate any false impression that may have arisen of late years, and particularly request physicians in ordering their Hoff's Malt Extract to specify "Tarrant's." This is a simple act of justice which every physician should be prompt to accord, inasmuch as if "by their works shall ye judge them," they prefer that their own works stand the test of the standard which they have set up and held to for so long. See their advertisement on page 15.

THE MALTINE MANUFACTURING Co., desire to call the attention of the profession to the many merits and points of advantage exclusively possessed by their preparation MALTINE in connection with cod liver oil. The high reputation of this concern for reliability and regularity of their various preparations entitles any claims made by them to at least a careful consideration by the practitioner seeking the best vehicles for the conveyance of his curative ability. Indeed it is not too much to say that an unconditional acceptance of their statements is entirely safe. We refer our readers to their advertisement on page 8.

OUR FEBRUARY ISSUE

Will contain an article by DR. JAS. E. REEVES, of Chattanooga, Tenn., entitled
 "ON ALL SIDES A LEARNED DOCTOR."

BUFFALO LITHIA WATER.

SPRING No. 2.

IN THE TREATMENT OF

URIC ACID CALCULI.

ART. IV.—BUFFALO LITHIA WATER IN THE TREATMENT OF STONE
IN THE BLADDER—ITS SOLVENT PROPERTIES—ITS VALUE
IN BRIGHT'S DISEASE, CYSTITIS, ETC.

BY JOHN HERBERT CLAIBORNE, M. A., M. D., OF PETERSBURG, VA.
Ex-President and Honorary Fellow Medical Society of Virginia, etc.

Reprint from the Virginia Medical Monthly of December, 1889:

"I have for many years been prescribing the use of Buffalo Lithia Water in cases of lithiasis, uramia, Bright's disease, cystitis, and of congener affections, and with the same marked results which have followed its exhibition in like conditions by a number of other physicians. The most striking instance, however, in which I have seen the solvent properties of the waters manifested has been in the case of Mr. Thos. D. Moss, of this city. Mr. Moss has been subject to attacks of lithiasis for several years; but in August last, after one of the most violent attacks of nephritic colic, passed gravel from the kidney into the bladder, where it remained for a week or more, setting up a severe inflammation of that viscus, with all of its painful and distressing symptoms. Finally, however, the gravel re-commenced its journey and became lodged in the prostatic portion of the urethra, cutting off the flow of urine and causing retention. Being compelled to use a catheter for the relief of this symptom, I pushed the calculus back into the bladder, as there was too much inflammation to resort to either the crushing of the stone or its removal by lithotomy.

I put the patient to bed, restricted him to a milk diet, administered opium suppositories in sufficient doses to relieve vesical tenesmus and pain, and directed him to drink the Buffalo Lithia Water in the largest quantities which he could bear. He succeeded in drinking from a half gallon to a gallon every twenty-four hours, and, at the end of about ten days, commenced to pass the detrita of the gravel, as I suppose, in quantities which seemed incredible. At all events, after passing his water upon a clean board, and allowing as much of it to flow off as would, you could then scrape up with a knife a teaspoonfull or two (after every passage of urine) of phosphates, urates, etc., closely resembling whitewash which had been applied to the board, and which had there dried.

This continued for a week. I then washed out the bladder several times with a warm solution of boracic acid, and Mr. Moss was soon on his feet again. At this writing he says that he is perfectly well and feels, for the first time in many years, entirely free from all kidney or bladder trouble."

Water in cases of one dozen half gallon bottles, \$5.00 per case at the Springs.

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NEW SERIES.

VOL. XVIII.

FEBRUARY, 1891.

WHOLE No. 314.

No. 8.

*Paullum sepultæ distat inertie
Celata virtus.*—HORACE

The

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TABLE OF CONTENTS.

PAGE.

PAGE.

On All Sides a Learned Doctor. By James E. Reeves, M. D. Chattanooga, Tenn.....	581
Why do our Teeth Decay so Fast?—By Geo. J. Friedrichs, M. D., New Orleans, La.....	596
The Specific Treatment for Tuberculosis; by Prof. Koch's Method—By Karl Von Ruck, B. S. M. D.....	599

PROCEEDINGS OF SOCIETIES:

The Twenty-Third Annual Session of the Mississippi State Medical Association.....	603
Gynecological and Obstetrical Society of Baltimore, Md.....	613
Tenth International Medical Congress.....	622

Cases Treated by Koch's Method at the Eye, Ear, Nose and Throat Hospital.....	626
Koch's Treatment—or Dixon's?.....	630
Impure and Adulterated Milk in Large Cities	632
The Recession of the Influenza.....	634
Surgery.....	635
Medicine.....	639
Laryngology, Rhinology and Otology.....	646
Dermatology and Hygiene.....	651
Book Reviews and Notices.....	654
Mortuary Report.—December, 1890.....	655
Meteorological Summary, December, 1890	656
Publishers' Department.....	657

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We respectfully request that physicians who prefer Fairchild's preparations will kindly specify them in order to avoid the imitations which are now urged upon the market as "just as good as Fairchild's." The substitution of these imitations can certainly be of no advantage whatever except to the maker of them and the one who foists them upon the consumer, as the same price is charged for these imitations as for the genuine article.

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NEW YORK.

# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XVIII.

FEBRUARY, 1891.

No. 8.

## ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceeding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.

### ON ALL SIDES A LEARNED DOCTOR.\*

By JAMES E. REEVES, M. D., CHATTANOOGA, TENN.

#### MEDICAL PROGRESS.

Probably at no time in the history of medicine in this country was there so much earnest discussion on the subject of medical education, both by physicians and legislators, as during the last ten years, and especially at present.

In answer to this expression of professional and public opinion, the standard of minimum requirements for graduation has been raised in a goodly number of the 100 medical colleges in the United States to the level of "respectability;" State legislatures have been invoked to pass laws regulating the practice of medicine and surgery, and existing State boards of medical examiners have displayed great activity in their endeavors to carry medical education to the highest perfection. But notwithstanding all this gratifying progress, much farther advancement is necessary before the large family of medical colleges in this country can be influenced to adopt a uniform graded course of instruction, and then in good faith adhere strictly to the minimum schedule of requirements for the doc-

\* Read before the Tri-State Medical Society of Georgia, Alabama and Tennessee, October 14, 1890, at Chattanooga.



torate; and when, also, there shall be equal uniformity of legal statutes regulating medical practice.

#### THE ANTAGONISM OF LOW-GRADE COLLEGES.

Unfortunately, it must be admitted that this good end—so devoutly to be wished—is actively antagonized by low-grade medical schools which have extremely poor facilities for teaching, but making none the less great pretensions in their alluring annual announcements to catch unwary students. In other words, the low competition among such inferior establishments to secure matriculants and large graduating classes is most degrading, and tends to lower the value of the medical diploma to the level of a mere trade mark—not to mention the true motive of their creation, namely, a little second-class local distinction, which affords the professors (?) opportunity to write their own exploits and puffs for the columns of the secular press, and otherwise display their names in professional connection.

One of the excuses offered for the establishment of provincial schools of inferior character, and in extenuation of the competitive energies employed by those engaged in the unpraiseworthy work of drumming up from all sections of the country, including the Canadas, and without the least regard to the quality of the material so collected, is the convenience of post-graduate schools at the larger centers of population, whither the young graduate, from an inferior college as well as from a high-grade medical school, may hie himself with his diploma, spend a few weeks or months as the case may be in *finishing*—usually in Gynecology, then returns to his location a most learned doctor—a *specialist* for all the name is worth, and, as my friend, Dr. Drake, of Chattanooga, suggests, immediately commences *hunting* business.

Since the above was written, there has been placed in my hands a college announcement for 1890-91, which offers really most captivating assurance of grand opportunities at small cost, notwithstanding the fact that the institution so brilliantly advertised with University parentage possesses neither college building nor apartments worthy the name it has assumed; has no hospital facilities, can afford no laboratory instruction—

indeed, possesses nothing much beyond bare walls, and can do nothing to justify the flamboyant pretensions set forth in its publication to the medical profession and "all the rest of mankind!"

The advantages of its curriculum are exceptionally good.

#### CHEAP GYNECOLOGY.

For example: The professor of gynecology will "efficiently" teach the *technique* of "the speculum, probe, digital touch, etc., together with the most approved plans for uterine and intra-uterine treatment." And can we wonder that inventive genius has taken advantage of opportunity, and produced such a variety of gynecological chairs? In fact, this piece of office furniture has become as necessary as the speculum and probe—the twin sisters in the physician's wallet.

But why in the name of high heaven did science (?) discriminate so severely against poor feeble woman—that her pelvic organs should be the seat of so many diseases, and made such common property! Her womb, the theater of so many tragic performances with the probe, sharp scoop or blunt curette, intra-uterine syringe and caustic injections; not to mention the different patterns of forceps for dilating the uterine cervix. But if this were all of the misfortune that shadows her, then the race might be thankful; alas, she must be *spayed* and made barren forever. What, think you, would be the response of the "lords of creation" if progressive pathology and wise surgery should discover that some of the neurosis in males could be promptly cured by castration? Nothing less, I am sure, than "Give me liberty, or give me death!"

An experience of forty years in general practice, together with the admonitions from contact with physicians representing all intellectual tendencies and moral make-up of character, affords the warrant of a moment's reference to my recollections of abuses of professional privilege which have followed the steps of advancing knowledge and more perfect technique in the comparatively new department of gynecology. Just how many melancholy examples I have witnessed of the transformation of true modesty and the virgin blush of innocence into the hardihood of utter indifference concerning the *touch*,

the use of the vaginal speculum and exposure of the person, and how many times, also, I have found a relaxed vagina equal to that of a child-bearing woman, caused by the frequent and unnecessary use of the speculum I can not now name, but some of these cases so deeply impressed me at the time of their discovery that I shall never forget them.

Thirty years ago the vaginal speculum and uterine probe were the most inviolable instruments in our possession; now they are habitually commonplace in every physician's satchel. It might be a profitable lesson to some of the young gynecologists of to-day if they could take time to familiarize themselves with the works of some of the old authors on the diseases of women, to see with what spirit of moral responsibility and true reverence they "went about doing good;" and to this end I could wish especially the incomparable lectures of Chas. D. Meigs on the Diseases of Women had not so far been forgotten, for it is the most attractive book I have ever read in its department.

Several years ago my friend, Dr. Wilson, of Wheeling, read before the State Medical Society of West Virginia "The Complaint of an Aggrieved Uterus," and the indictment made by the learned, witty author stigmatized meddling gynæcology with all the force that language could give. But I pray you not to forget that I am now speaking of the abuse of priceless knowledge and the shame which has been put upon the crowning glory of modern surgery; for I trust you will do me the justice to believe that I am fully sensible of the usefulness and safety of the instruments and operative procedures above named when employed and performed by those who know *how* and *when* to resort to them. Confucius says: "To know that you know what you know, and that you do not know what you do not know" constitutes the sum of all human knowledge.

#### THE BIRTHPLACE OF ABDOMINAL SURGERY.

While discussing this part of my subject I am reminded that we are assembled within a few hours' ride of Danville, Kentucky, the birthplace of abdominal surgery, where, in December, 1809, Ephraim McDowell, who first had the judgment to divine and the intrepidity to brave the performance of an



unrecognized and most perilous operation, opened the abdomen of Mrs. Crawford, who traveled sixty miles on horseback to consult him, and was returned to her home within the next twenty-five days—on horseback as she came—relieved of her immense ovarian tumor and in perfect health. All praise, and voices and hearts unite in saying, to the memory of the great man who won such imperishable honor for our fair Southland; and whose hardy genius made him as great in the broad field of general practice as he was great in surgery and a blessing to all mankind! Marion Sims, Thomas, Emmet, Nott, indeed, every really great specialist in gynecology builded on the firm foundation of the general practitioner.

#### THE GENERAL PRACTITIONER.

The point I wish to enforce by these personal references is the tendency of the present method of medical education to produce *one-sided* physicians; hence the necessity, I think, of recruiting the thinned ranks of the general practitioner: the man who is on all sides a learned doctor—a psychologist as well as gynecologist; pathologist as well as obstetrician; bacteriologist as well as ophthalmologist, otologist and laryngologist; who can treat a childbed fever or a babe suffering from measles and a capillary bronchitis; who can make a circumcision or perform an ovariectomy; who can read understandingly the tracings of the sphygmograph as well as discover and appreciate the value of a choked disc; whose knowledge of poisons and their antidotes is as ready as his disposition is always willing to serve and succor to the utmost; whose skill in differential diagnosis enables him, by manipulation of the microscope, to strike the sharp line of contrast between Laveran's malarial protozoon—his crescents and pigments—and the enteric or typhoid bacillus; who can take up either a fresh sputum, or a dried one collected a thousand or ten thousand miles away, and say positively that it *is* or is *not* tuberculous, even before there is present in the case a physical sign to warrant an unfavorable prognosis; who, by means of the same instrumental aid, can mark the progressive structural changes in Bright's Disease, or discover a leucocythæmia; who can differentiate cardiac murmurs as well as pronounce an epithelioma in one case, and

in another a sarcoma ; and, to cover all, whose perceptions and sensibilities have alike been educated, refined and fitted for the faithful discharge of his high calling.

It was said of Robley Dunglison that he could ably fill any chair in Jefferson Medical College, and because he was "on all sides a learned doctor" he was frequently called on by his colleagues to represent them at their lecture hours. His style, whether before his classes or in his writings, was remarkably clear and polished ; refined without affectation, and easy without the sacrifice of dignity and correctness. "Dunglison's Dictionary" is the most enduring monument of his learning, but it required his Physiology to prove that his great mind and soul were all aglow with true poetic fire.

#### PROFESSIONAL EMINENCE.

Such embodiment of learning and skill as above outlined—the ideal physician—possible in the few, is not and can never be the measure of acquirements in the large majority of really useful workers in the vineyard of medicine and surgery ; for we must face and accept the unwelcome truth that of all human activities there are but about 10 per cent. of successes, and, of course, medicine must come in for her share of failures. This thought, that but ten of every hundred of the grand army of graduates in medicine sent out every year may hope to reach eminence in the profession, is most discouraging ; but Dame Nature is very choice in her endowments, and when she sets her signet for a man she sees to it that he has "a hard road to travel," and is not fed on sugar plums.

The human body is not composed, like the objects in chemistry, natural history, or abstract science, of independent forms and members. It is a sympathetic whole, a living whole, "fearfully and wonderfully made," and can not consciously be injured in any part without the "cry of the suffering organ." If one member be diseased, the sympathetic bond which unites all divisions and systems of the organization is impressed accordingly ; and this is the natural reason why the *specialist* should first build on the broad foundation of the general practitioner whereby all his senses may become well educated. Hence it is that when an experienced physician dies the best

part of his knowledge dies with him. No language, no pen can convey his cultivated perceptions—no more than we can find language to describe the difference between the voice of one familiar friend and another; yet, we may be as conscious of the difference as we are of our own existence. In other words, we can not always give the “reason for the faith within us.” We may know the truth without being able to tell why we know it; so it is with the best knowledge gained at the bedside by long experience.

#### RESPONSIBILITY TO THE PUBLIC.

Besides the responsibility resting upon the physician in private practice there are many public opportunities afforded when he may make answer creditably to his profession and promote the welfare of society. The frequency of occasions on which he is called to give evidence in a court of justice has become almost an every day occurrence, and very many real hardships are thus imposed. The case may involve no less than the life of an individual, the forfeiture of his property or the confinement of his person; and how well the medical witness should be prepared for the discharge of such duty to society—of speaking on oath, and thus renewing the most sacred pledge before God between man and man. His testimony should be given in a straightforward, perspicuous manner, thoroughly understood and conscientiously felt. Thus intrenched on the secure foundation of “truth, the whole truth, and nothing but the truth,” and fully conscious of his rights in court, he will pass from the witness stand unscathed by the darts of wisdom, wit and foolishness, let fly quick and fast by counsel for his discomfiture.

On the civil docket he may be called to testify concerning insanity, idiotcy, pretended diseases, assumed injuries, sexual abnormalities, pregnancy and childbirth.

In the criminal calendar he may be required to testify in cases of alleged poisoning—animal, vegetable, mineral or gaseous—concerning wounds, blood stains, abortion, infanticide, concealed birth and the evidence of live birth; rape, apparent death from drowning, hanging, alcoholism, apoplexy, suffocation, lightning, freezing, epilepsy, and the evidence of death,



## KNOWLEDGE OF THE FORMS OF LAW NECESSARY.

The physician should also be familiar with the forms of law relating to the transfer or alienation of property; for his advice and service may be required in cases of sudden emergency respecting a last will and testament, and to this end he should be well informed of the incapacity of persons of weak or unsound mind either from insanity, idiocy, or dotage, to make bequests and dispose of their property. He should be equally familiar with the law in relation to wills and testaments of testators in *extremis*—called *nuncupative* testaments—depending merely upon oral evidence before a sufficient number of witnesses, and afterward reduced to writing.

## IMPORTANCE OF THE OFFICE OF CORONER.

The office of coroner is of very great importance to the public, and its duties can be performed properly only by a physician or surgeon of high professional culture; for the persons who are usually summoned on juries of inquest have not and can not be supposed to have any acquaintance with the various operations of the animal economy—to know the healthy from the diseased structure, the probable effects of different acts of violence that may be committed on any part of the body, or the morbid appearance of internal organs produced by taking poison: therefore, they are necessarily directed by the county coroner in formulating and returning a verdict.

## POISONS—RULES TO BE OBSERVED.

The labors of naturalists, chemists, physiologists and microscopists have, of late years, been greatly extended to advance our knowledge of poisons, their effects and antidotes; and there are but few subjects more worthy the attention and careful study of the scientific physician, or of more advantage to mankind, whether as supplying the best means of averting their deadly effects, or enabling us to detect crime of the most devilish description.

Poisons may be taken directly into the stomach by the mouth; into the lungs through the medium of the air; into the bowels through an enema or suppository; into the circulation by means of the absorbent system, to which they may be con-

veyed through the hypodermic needle, or by ointments applied to the skin.

In investigating such a case, attention should be given to discover, if possible, the particular agent taken or administered, the vehicle in which it was swallowed, and whether taken before or after a meal. The kind and quality of food last taken should be most critically examined in order to determine whether or not any mineral, chemical, or vegetable poison, or animal matter in a putrescent condition had been taken into the stomach; and, also, whether such food possessed peculiarity of taste and smell.

Three or four years ago, in the month of April, four families were poisoned in Cincinnati from eating cream puffs. That these delicacies (?)—composed of milk, flour, eggs and sugar—had undergone decomposition was shown by their sour, offensive odor; and chemical and microscopical analysis succeeded in isolating the needle-shaped crystals of tyrotoxin or diazobenzol, a poisonous agent formed during the process of putrefaction of animal matter, such as milk, ice cream, cheese, spoiled meats, oysters, canned meats and fish, a transition product which quickly decomposes itself; but the micro-organism which produces the ptomaine poison has not yet, I believe, been isolated. For the best knowledge on the subject we are principally indebted to Prof. Victor C. Vaughan, of the University of Michigan, who has clearly demonstrated that this poisonous ptomaine is the cause of cholera infantum; and, accordingly, he has given specific rules for the care of milk, which, if strictly followed, would free the summer months of that scourge of the nursery, cholera infantum.

No doubt this was the poisonous agent which made so many persons suddenly and dangerously sick in Birmingham, Ala., last summer, an occurrence that was reported in the associated press dispatches with the intimation that there might have been criminal intent. The rapid advancement of medicine from empiricism to scientific accuracy is thus well shown by our better knowledge of foods and the diseases occasioned by their decomposition.

Symptoms common to many diseases are similar to those which arise from poisoning, and there are many cases on

record which might be cited to justify the assertion. What physician of ten years' experience has not seen a case of uræmic poisoning in which the symptoms of opium poisoning were present? In fact, many mistakes have doubtless been made because of the close similarity of symptoms in these conditions.

Again, gastric and intestinal symptoms, such as nausea and vomiting, burning heat and dryness of the mouth, throat and œsophagus, with great thirst, purging, griping, cramps, swelling of the abdomen, small, quick pulse, cool, clammy skin, and a blanched countenance, may be produced from having eaten poisonous food; besides, it is a well known truth that in some persons idiosyncracies play a very strange and serious part; and that all the symptoms just recited may be produced by eating certain vegetables, fruits, fish, oysters and clams.

In all cases where criminal intent is suspected, the matter vomited should be carefully preserved for chemical examination; and should the case terminate fatally, the whole of the contents of the stomach and abdominal viscera should be preserved. All this care, and irrefragable proof, are necessary before an opinion should be given that a person has been poisoned. It would be easy to cite cases in proof that lesions of structure or texture found *post mortem* in cases of chronic diseases of the stomach, cholera morbus, etc., may closely resemble those witnessed in the examination of the stomach from chemical poisoning. It was John Hunter who first showed that the stomach of persons dying from starvation, or suddenly from any cause, is frequently found ecchymosed and eroded in various spots; and that perforations in this organ have been met with in cases where there could not be any good reason for attributing them to the effects of poison is a well known fact. It is, therefore, of extreme importance to carefully weigh every symptom that may be presented in the case, and to compare the same with the morbid appearances that may afterward be found to exist; for there is warrant to fear that from want of proper knowledge some individuals have been condemned upon insufficient testimony, and hence punished most unjustly.

#### CRIMINAL ABORTION.

Evidence of criminal abortion, infanticide, and concealed birth should be most searchingly examined in order that jus-



tice may be done. It is the experience of criminal courts in all the States that abortionists go free because the law can not catch them, owing to the difficulty of proving a *living embryo* at the moment the criminal dose was taken, or the probe introduced. Indeed, nothing short of the confession of the woman herself, which jointly criminales her guilty accomplice, can insure conviction; for that reason State prisons are denied the custody of many villains who make commerce of human life *in utero*. At the moment of conception the dual life in the pregnant woman begins; and to destroy "the fruit of the womb" is nothing less than murder! Yet every physician who has seen much of the private life and virtues as well as the public life and frailties of woman in all ranks of life must have had now and then his heart melted with compassion for the unfortunate who were pregnant without daring to avow their condition because of the world's cold frown. Why should not poor fallen woman be permitted to return to respectability in life while the forgiveness and mercy of God are as much her's as the man's who took from her the wealth of her virtue and the beauty of her good name? Surely, she is less criminal and more to be pitied than the world believes!

#### EVIDENCES OF LIVE BIRTH.

Every experienced obstetrician is fully sensible, I think, of the unreliability of the accepted "evidences of live birth;" and the wide discrepancy that exists in the opinions of distinguished medico-legal writers and jurists on the subject is the full warrant for the belief that, possibly, in numerous instances rank injustice to an innocent person may have been done under the forms of law. The following questions comprise the most material points in the inquiry: Was the child born living or dead? If dead, what was the cause of death? Has the suspected mother been recently delivered? Do the conditions of the supposed mother and child confirm the suspected relationship?

The medical witness should be extremely careful in his answers concerning the value of the hydrostatic test in the absence of confirmatory evidence, for undeniable cases are on record to prove the possible occurrence of uterine and vaginal

respiration, and that the lungs of infants notoriously still-born will float. I myself have been the witness several times that a child may cry aloud while the neck and shoulders are hanging in the vagina. Besides, how often is it the case that, in spite of the employment of the best directed means to save them, children who were alive at the moment of birth have been lost?

Another very important point should always be borne in mind by the medical witness, namely, that lividities or discolorations which occur spontaneously after death and found on the back and thighs, or on parts subjected to pressure when the body is cooling, should not be confounded with ecchymoses or suggilation, a true effusion of blood which has formed a coagulum—sometimes in the form of a tumor—adherent to the meshes of the cellular tissue, and is the result of injury during life.

#### RAPE, AND ITS PROOFS.

Concerning the subject of rape, it is well known that of all the cases on record 75 per cent. were upon children under twelve years of age. That many false and trumped up accusations are made for the purpose of blackmail, or to compel marriage, or to ruin the character of the accused when the woman finds she can no longer conceal her pregnancy, is unfortunately too true in all communities. The grave charge may be made without there being a sign to prove it. Hence the necessity that the medical examiner and witness should carefully make note of every fact connected with the case; the age, social relation, mental condition and immediate surroundings of the place at which it is charged the outrage was committed; the time that has elapsed since the alleged act, the size of the woman and her physical strength as compared with the man whom she accuses, the condition of her genital organs and any marks of violence. He should take possession of all stained linen and collect specimens of any discharge found in the vagina, for microscopical examination. Especially should the examiner be on his guard when the subject of such alleged outrage is a child; for it is not uncommon to find among ill-fed, scrofulous and dirty children a purulent discharge from the vagina, with redness and swelling of the labia. True seminal spots, in

99 per cent. of all the cases, can only be shown by the presence of spermatozoa; and the finding of these bodies in the vagina, or upon the labia, is positive proof of sexual connection. But the *trichomonos vaginalis*—a microörganism of tadpole shape and resembling the human spermatozoon—should not be mistaken. Under the influence of chloroform, or a full dose of morphia, much violence may be done without the least resistance, but I cannot withhold my firm belief that if a woman of ordinary size and strength determines to defend herself against such an assault no man can overpower and ravish her. It is too often the case that

“A little she strove, and then repented,  
Whispering she ne’er would consent—consented.”

#### EVIDENCE OF DEATH.

To distinguish apparent from real death—to ascertain whether the vital spark be extinct, or merely dormant, is of the highest importance; and the body of no person dying suddenly should be consigned to the grave until appearances of commencing putrefaction have set in. In the drowned, the right heart in particular is found choked with dark blood; the lungs are livid and likewise distended with dark blood, while the bronchi contain a frothy effusion of a pale red color. In those who die by a stroke of lightning, the blood loses its power of coagulating, and there is complete destruction of its corpuscles.

#### WOUNDS AND BLOOD STAINS.

On the subject of wounds, the law looks both to the intent and the effect produced. The medical witness should be exceedingly careful in his answers concerning the exact character of wounds in advance of a *post mortem* examination.

In the examination for blood stains, the present state of chemical and microscopical science warrants specific answer, whether the stain be found on clothing of any fabric, upon the floor or walls, on the ground, on knives, clubs or other implements of death. By such knowledge—the detection of blood stains—the guilty may be punished and the innocent set at liberty.



## THE INSANE.

The most pitiable wards of the State are the insane. The dictates of law, as well as of reason, pronounce them guiltless. They are neither held responsible for their actions, nor are they considered to be susceptible of reform from the influence of opinion, or the fear of punishment; yet the legal test of criminal responsibility, formulated nearly 200 years ago, is the rule of to-day, in this fair country, where there is progress in all things save in the musty pathway of common and criminal law. To be able "to know right from wrong" fixes criminal responsibility, yet this knowledge is possessed in all forms of mental unsoundness outside of idiotcy and dementia. At the annual meeting of the British Association of Medical Officers of Asylums and Hospitals for the Insane, held in London, July 14, 1864, at which were present 54 medical officers, it was unanimously

*"Resolved*, That so much of the legal test of the mental condition of an alleged criminal lunatic as renders him a responsible agent, because he *knows* the difference between right and wrong, is inconsistent with the fact well known to every member of this meeting, that the *power* of distinguishing between right and wrong exists very frequently among those who are undoubtedly insane, and is often associated with dangerous and uncontrollable delusions.

The practice of every superintendent of an insane asylum is in conformity to the opinion above given, else why, indeed, the offer of rewards for obedience and good behavior, and the promise and infliction of punishment for disregard of hospital rules? It is a part of our professional duty to use our influence to save to the uttermost this irresponsible class of people from punishment due to criminals, and afford them all the consideration demanded alike by advancing science and a large philanthropy.

## CONCLUSION.

And thus it is seen what a many-sided prism is medical science, and like our human nature but one side or face may be presented and show polish, or all sides alike may be smoothed to such high grade of finish that a continuous absorbing and reflecting surface is shown.

In a science so complicated and obscure in some of its laws, every energy should be employed to clear the broad field on which its foundation has been laid: to understand perfectly the numerous subjects which it embraces, and to apply its powers to the comfort and continuance of human life.

In no other department of knowledge is there required such clear, penetrating intellect—so much talent with genius—such fixedness of purpose—and such a retentive memory.

It embraces many profound truths which are concealed from a cursory inspection, and therefore requires the most searching intellectual power to recognize them; to distinguish certainty from mere opinion and probability, and separate the essential from the accidental. For the attainment of the ultimate object of medicine, there must be a personal as well as intellectual fitness. Stability of judgment, fine perception, quick decision, great presence of mind and coolness in the presence of grave conditions, ready recollection, elegance and gentleness of manners, knowledge of human nature and the secret recesses of the heart—all these fine qualifications are necessary in the physician.

The medical student who would win eminence in his profession must deny himself the glory and tinsel of society life; he must be that ceaseless worker to whom idleness is an impossibility and a thing incompatible with his calling; he must be fearless—brave enough to utter the truth whether it bring him joy or sorrow, whether his path lie over sunny spots and fragrant flowers, or in the wilderness, with nothing but the night and the tempest for his companions. He should not be like the sunlight on the wall, that comes and goes and leaves no mark behind, or the shadow on the shore, which silently passes and disappears, leaving no imprint to indicate its course on the sands; but strive to be that larger actor who makes the world the theater of his operations and all humanity his audience. He must dive into the chambers of his own industrious mind and bring up truth for the help of mankind. He must go out into and beyond the field of unaided vision and become familiar with the wonderful forms of microscopic life and apply the precious knowledge thus gained for the prevention and cure of diseases; for none but the learned can

read the mysteries of nature, and feel from the movements and vital metamorphosis of protoplasm the wisdom and power of an ever-present Deity!

## WHY DO OUR TEETH DECAY SO FAST?

By GEO. J. FRIEDRICH, M. D., New Orleans, La.

This singular question attracted my attention, as it asserts that all teeth must necessarily decay if they decay "so fast," and I thought to myself, if such is the case, why not put the question in a different shape, and at once ask: "Why do human teeth decay at all?" Of course, if this last question was left for me to answer, I would respond by asking another, that is, I would wish to be informed why the waters of the Mississippi run up hill?—which I think would pretty well settle that last question. As to the first question, one Dr. Julius Pohlman answers: Because we do not use them enough: secondly, showing that, as a rule, "those people who are the least acquainted with the so-called hygiene of the teeth are the happy possessors of the soundest dentition," for example, like the negroes who chew sugar cane, the few old people left among us who persist in eating bread crusts, and the German peasants who are famous for their brilliant Schwartz-brot Zähne, or rye-meal-bread teeth (unfortunately, no Scotchman ever crossed his path, or else oatmeal must of necessity come in for a share of his praise) and he further says that their teeth are polished, but not worn out by daily mastication of dry, hard, black loaves. Our weak and effeminate teeth are not used to hard work, and, like other organs that are not exercised, tend to undergo atrophy. The foundation for bad teeth is generally laid in early childhood, for numberless mothers and nurses very carefully soften the food or remove the crust from the bread before giving it to the little folks, because it might otherwise "hurt their teeth." And so the children grow up with a set of unused organs in their mouths; and when we have finally succeeded, by the creation of artificial conditions, in producing weak organs, then we wonder why the poor child has such bad teeth, and why it is



so often suffering with toothache, and why the dentist's bill is so high. Teeth are organs specialized to perform the work of mastication: they are subject to the same laws that govern other organs, and their strength is determined by their use. Understanding this, we are obliged to admit that if we ever become a toothless race it will be our own fault.

Now, let us examine these platitudes in the order of their promulgation:

1. It is asserted "because we do not use them enough."

Before entering into this subject, we must of necessity take into consideration how these organs are formed, what functions they are expected to fulfil, and in what relation they stand in regard to other organs of the human system. The only chance for perfect development of these organs (that is, the teeth) to resist decay is in thorough amelification, as the only other alternative is, that the enamel deposited on a newly-erupted tooth may harden by desiccation after it makes its appearance, as a crystal, once formed, can not become denser except through desiccation. It has been stated that enamel was nothing more or less than a coat of mail supplied by nature to protect the dentine and subserve the processes of mastication, and, as enamel is proof against the fluids of the mouth in a normal condition, it stands to reason that "the chewing of sugar cane or rye meal bread" has nothing to do with "effeminate teeth" or that organs (that is, the teeth) not exercised tend to atrophy.

Nature is a beautiful and harmonious whole, the incarnation of a faultless logical process. Beyond a doubt, the teeth are intended and are placed in the oral cavity for use as well as ornament, and that the proper use of them conserves to a healthy condition, not only of the body, but also of the oral cavity in which they are placed, can not be questioned, but that simply the use of these organs, whether perfectly organized or not, whether the fluids of the mouth are in a normal condition or not, will suffice to prevent the decay of these organs, I seriously doubt.

Next: "Those people the least acquainted with the so-called hygiene of the teeth are the happy possessors of the soundest dentition."

Who are those people that are called upon to sustain and verify the hypothesis advanced? Negroes and German peasants, whom nature has supplied with excellent teeth. These are not the creatures of luxury, where retrograde metamorphosis ensues from diverted, improper or inadequate nutrition. The vitality of their well organized tooth structure is quite sufficient to counteract the effects of any active external agent which might temporarily be present, whether sugar cane is chewed or black bread is eaten or not, for we must remember that caries is simply solution or disorganization of teeth constituents by agents which are always external, but which would be quite inert under normal constitutional conditions; besides, the fact has been established that even where caries, having made considerable progress, ceased and made no further progress for years; and this can only be explained on the principle that the condition necessary, and which led to the decay of the teeth, terminated. Then again, caries of the teeth is only incidentally connected with the diseases which prevail among a class inured to constant physical labor, whose minds are fully occupied in solving the question of daily bread, and who are content when food, clothing and shelter are provided.

Dr. Kingsley very aptly states: "Given, an unimpaired nervous system, in a sound body without inherited taint, and teeth would never decay so long as that condition was maintained, and that, too, irrespective of climate, peculiar kinds of food, or any external agents which might be present in the natural course of nutrition. Even cleanliness, now considered so essential, would be unnecessary as a preservative of the teeth, and need be practised only for its comfort."

I will endorse the above, provided perfectly organized teeth are included in the unimpaired nervous system and sound body.

In conclusion, perfectly organized teeth in a normal or healthy condition of the oral cavity are rarely attacked by caries; the loss of these organs under these circumstances takes place more from absorption of their sockets, if lost at all, than from caries.

2. The mere use of them will not prevent decay.
3. Neither negroes nor German peasants are exempt from

caries of the teeth. Of this fact we have, I might say, ocular demonstration daily.

4. "Teeth are organs specialized to perform the work of mastication."

But that they are subject to the same laws that govern other organs in connection with the human system I deny in toto.

"That their strength is determined by their use" is another fallacy; as well as the statement that "if we ever become a toothless race it will be our own fault;" an occurrence which as long as the dew descends to kiss the opening flower, the orb of day to illumine this terrestrial sphere, or knowledge becomes obsolete, not until then will this dire calamity overtake the human race.

## THE SPECIFIC TREATMENT FOR TUBERCULOSIS

BY PROF. KOCH'S METHOD.

By KARL VON RUCK, B. S. M. D.,

Director of the Winyah Sanitarium for Diseases of Lungs and Throat, Asheville, N. C.

It is only three or four months ago since I pointed out in a paper presented before the American Climatological Association, at Denver, Col.; that nothing could be expected from medication in tuberculosis, and that beyond climatic treatment all our real efforts consisted in a so-called prophylactic therapeutics, by which we would keep the patient at his best and prevent injurious influences and consequent relapses.

To-day we have before us a specific medication, which has already wrought undoubted clinical results, the discovery of which is destined to open the door to possibilities little dreamed of by our predecessors. Prof. Koch\* has been blamed, and, I think, very unjustly, for withholding the details and composition or method of preparation of his discovery; indeed, were he to give it at this time there would be no end to imperfect and undoubtedly positively dangerous products all claimed "to be exactly after Koch's method." I have every reason to believe that it is the intention of the discoverer to publish every detail

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\* Since the above was written, Dr. Koch has given his secret to the world.—*Eds.*



of the preparation of the so-called lymph and the various steps which lead to its production in its present form; but not until its extent of applicability and utility have been permanently settled by clinical results *obtained only with the product of his own laboratory*. No one can blame him for this wise precaution. No one is asked to use it until the experimental period is passed, for Dr. Koch has abundant facilities for its clinical application.

The specific effect of the lymph is already abundantly demonstrated, and no one can doubt it who has either seen external tuberculosis under its influence, or post mortem examination of patients who have died under the use of the remedy. Its selective effect upon tubercular tissue simply astonishes one who sees it for the first time. I have to-day looked into the larynx of a patient twice, once before the injection of half a milligram and then again about four hours later, with this difference, that at first examination the tubercular infiltration appeared uncertain, the color was diffused red and the nodules upon the false vocal cords scarcely visible. Four hours later, the pear-shaped, airy, epiglottic enlargements have become much enlarged, cluster-like tubercle nodules project, though as pushed out, the line of demarcation is distinct and the dusky color of the infiltration merges abruptly into the pale pink adjacent healthy mucous membrane. The nodules upon the false vocal cords are enlarged and project distinctly and form a vivid contrast in their livid color with the surrounding tissue. Similar are the results after injection in two cases of lupus under my care.

Post mortem we see just such effects upon tubercular localization, be that in the lungs, the kidneys, or any other part. But one must see these things: it is impossible to believe and realize these changes without.

There is no doubt of the specific action of the fluid, to any one who can see and willing to believe his senses.

The next and much more important questions are, however, is this effect curative, indifferent, or detrimental in its results, and in my judgment these questions must all be answered in the affirmative, depending upon the selection of the case, and the judgment exercised in the application of the remedy.

In Berlin, where I have had every facility of study of cases in all phases and stages of tubercular disease, I found ample material to satisfy myself, as well as that was possible, that years must elapse before we can draw the lines with any degree of accuracy and certainty, and that during that time the wholesale commission of fatal errors can only be prevented by restricting the use of the remedy to institutions where the method can be and will be carried out under all the precautions possible; and the precautions are so manifold and being constantly added to that instead of extending the application of the treatment to all sorts of cases and stages of the disease I feel like limiting the use thereof more and more.

From my experience both in Germany and since using the lymph in my institution I feel reasonably certain that it can be applied with safety only by beginning with much smaller doses than the usual one milligram, for I have seen all the swelling and reaction I care to see, without the necessity for tracheotomy, after an initial dose of three-tenths of one milligram in a case of laryngeal phthisis.

I believe, further, that cases of laryngeal phthisis are peculiarly suitable for the treatment with expectation of good results when the lung disease is not exhaustive, no recent softening process having occurred, or the pulmonary deposit is latent.

Cases in the *real early stage* of phthisis, that is to say, where no destructive processes have yet occurred, simple infiltration of the apices are the auspicious cases of pulmonary tuberculosis, and I have not seen a single such case, not otherwise complicated, where the local and general symptoms did not show prompt improvement, and in quite a number of such in Berlin I have been able to witness the entire subsidence of all local subjective symptoms.

In more advanced cases the results become more and more uncertain, until in the later stages and far advanced cases the improvement becomes the exception, rapid loss in the general condition of the patient the rule, and no influence is shown in occasional cases.

In these cases, when the remedy is used at all, the doses should be given further apart, to allow of recuperation after the

reaction to the previous standard of weight and strength of the patient, even if a week or ten days must intervene, for no remedy can be ultimately beneficial under which the already much exhausted patient is steadily losing in flesh and strength, and faster than he did before the treatment was inaugurated.

In all advanced cases the presence or absence of tubercular localization in the kidneys should be determined as far as that may be possible by examination of the urine for bacilli and albumen, and those examinations must be continued during the periods of reaction until we can be sure that we have nothing to fear from the production of reactionary swelling of such deposits with its fatal results.

In lupus, the initial dose of ten milligrams, recommended by Prof. Bergman, has already furnished its victims, and while a little time may be lost, I do not consider it safe to begin with more than one milligram, from which I have seen decided reaction.

In every case the larynx should be examined, be it lupus or joint disease, or an affection of the respiratory organs, for which the patient comes under treatment, and if there is even a suspicion of tubercular infiltration the same caution must be used as we would did we fear sudden œdema and its consequences.

I am happy to be able to report material progress in my laryngeal cases, both cases of lupus, as well as in very early stages of pulmonary tuberculosis. At the same time I must state that I enforce the same climatic and other management as I did before Koch's lymph was used, and under which we have been accustomed to see improvement and recovery quite regularly in the early stages of tubercular phthisis.

Neither do I believe it justifiable to abandon these tried means which years and years of experience have given us; on the contrary, I feel certain that we have still a formidable enemy, although our weapons have been reinforced by a most important one, enabling us to rob the disease of its specific character; but that now, as before, we need the entire influence of each and every beneficial agency at our command for the production of the best results.



Finally, I do not believe in the suggested possibility that the specific caused dissemination of tubercular processes in cases where this has been found post mortem. All these cases were far advanced in the disease, and unsuspected tubercular localizations have always been found when looked for in our post mortems of tubercular subjects, and long before we knew anything of the tubercle bacillus.

That we look more carefully for such when a "lymph subject" comes upon the post mortem table is natural, and that such localizations appear more prominent, congested, and showing recent inflammatory changes is only another evidence of the specific effect of the remedy, indeed, applied in a hopelessly advanced case.

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## PROCEEDINGS OF SOCIETIES.

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### THE TWENTY-THIRD ANNUAL SESSION OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION.

Convened in the City of Jackson, April 16, 1890.

#### SECOND DAY—MORNING SESSION.

[Continued from page 547.]

Meeting called to order at 9 A. M. by President Halbert.

Committee on delegates to American Medical Association nominated the following as delegates: Drs. G. W. Trimble, B. F. Kettrell, W. B. Sanford, J. M. Green, J. E. Halbert, J. C. Denson, Luther Sexton, J. W. Dulaney, T. R. Trotter, T. T. Beall, Wirt Johnston, C. M. Murry, J. A. Cresler, W. S. Sims, L. C. Elliott, C. Kendrick, J. J. Harralson, F. Ferrel, H. G. Sinclair, W. H. White, J. E. Noble, K. S. Toombs, J. M. Buchanan, H. H. Harralson, W. F. Hyer, M. J. Thompson, H. L. Sutherland, W. E. Todd, Gus. Evans, J. H. Blank, M. V. D. Miller, B. F. Duke.

On motion all were duly elected as representatives of this association, and the secretary instructed to furnish each with proper credentials.

Dr. N. G. Carter was elected to membership.

On motion, Dr. Newton, of Louisiana, was invited to a seat on the floor and to participate in the discussion of papers.

Dr. T. P. Lockwood, Crystal Springs, read a report of a case (hystero-neuroses). Paper referred without discussion to the committee on publication.

Dr. William Aills, Steers Creek, presented a paper (report of two cases ovarian tumors).

THURSDAY, APRIL 17, 1890.

Dr. Aills' paper on ovarian tumors, discussed by Drs. Crafford, Beall and Sale.

Dr. T. J. Crafford, of Memphis (after asking the author if the patient had rigors, and if she lived in a malarial district), spoke of the absence of facts in the report of the case, and the great necessity of a knowledge of those facts before an intelligent diagnosis could be arrived at. He spoke of the leading operators of the day and the most distinguished diagnosticians being the most conservative in giving an opinion. He also spoke of the various mistakes that had been made in this connection by our most distinguished surgeons. He then reported a case upon which three years ago he made an exploratory incision, and found the enlargement to be an enlarged and dislocated spleen. He spoke of the absence of the connection between the tumor and the left side, where the spleen is ordinarily attached, being in this case wanting, and further adding to the difficulty, and the necessity of an exploratory incision before a diagnosis can be arrived at. In this case the peritoneal cavity was drained of a dark sero-sanguinolent fluid and there was as yet no rise of temperature, and no symptoms following the operation.

Dr. Beall: The question is first upon the diagnosis, and was the trouble really inflamed ovaries? The symptoms, I think, did not indicate it. Acutely inflamed ovaries reaching the dimensions those enlargements did could hardly have been expected to have undergone resolution. The tendency is always to suppuration. There was a complete resolution and a maintenance of the healthful ovarian functions. The symptoms and history point rather to hæmatocele. This is extra-peritoneal or intra-peritoneal, the former very painful. The effusion takes place within the peritoneal folds of the broad ligament.

Dr. E. P. Sale: For lack of more accurate data in the history of the case it is impossible to arrive at a satisfactory diagnosis of the doctor's case. I suspect it is among the possibilities that the hæmatocele is the result of an apoplexy of the pampiniform plexus of veins. As an evidence of the impossibility of arriving at a satisfactory diagnosis without making an exploratory incision he detailed successively cases of laparotomy for

hydatiform degeneration of the peritoneum which had previously been diagnosed as a multilocular variation, the cyst undergoing suppuration.

Election of officers for the ensuing year resulted as follows: President, Dr. G. W. Trimble, Grenada; First Vice President, Dr. J. N. Murry; Second Vice President, O. B. Quinn; Recording Secretary, W. E. Todd, Jackson; Assistant Recording Secretary, Dr. B. L. Colly, Jackson; Corresponding Secretary, Dr. S. K. Coleman, Canton.

Drs. J. E. Halbert, Luther Sexton and B. F. Ward were elected to fill vacancies in the Judicial Council.

Dr. E. L. McGehee, of Woodville, was elected to fill the unexpired term of Dr. R. T. Edwards, deceased, on the State Board of Health.

Dr. S. R. Trotter, of Duck Hill, was elected to fill the vacancy on the State Board of Health caused by the death of Dr. S. V. D. Hill, of Macon.

Discussion of Dr. E. P. Sale on Dr. T. J. Crafford's paper on

### *Metritis and Endometritis.*

I regard that as a very good paper, because it is a paper which discussed *seriatim* the whole domain of uterine pathology, with the exception of the diseases of the ovaries, and it branches on that. Of course, in so short a time one could not do justice to it. There are some points, however, that I might touch on, and they are about these: I was, I confess, a little disappointed when I heard Dr. Crafford's expression of conservatism to hear him pass over uterine pathology without mentioning hardly one word of the treatment of uterine troubles without internal medication. He speaks of the endometritis that is cured by local applications in various ways, but not once has he said one word about the use of uterine medicines—medicines which have a direct influence upon uterine inflammations. Now, I have heard for some little time that the profession is becoming as the result of specialism entirely too one-ideal. It is showing too much attention to the objective treatment, and consequently objectionable treatment, to the exclusion of internal medication. In other words, there are too many gynecological surgeons and not enough gynecological physicians. There are medicines which we know have a direct influence on the uterus. There are many old drugs that have passed into disuse that we know from a personal experience have a direct influence in uterine troubles. A lady has typhoid fever, perchance pneumonia, she gets up naturally very much debilitated, and she may live in a malarial climate. Then we have the uterine catarrh. Just like the man



with the debility (?) who has laryngeal catarrh, or bronchial catarrh, and by saturating the system with iron, and by giving him ergot and strychnine, we check that catarrh. The first thing the gynecologist does is to clear that out and salivate with iron and tincture of iodine and establish drainage, and when the relaxed uterus topples like a drunken man on horseback you might as well make applications to his feet as to make application there with the expectation of giving relief to that uterine catarrh. If that patient is saturated with iron, and the use of strychnine combined with ergot, that uterine catarrh is relieved. Now, I think we should not pursue a specialty so that we forget to be physicians. We must take into consideration all the effects. We get too one-ideal in devoting all our time to the mechanical, surgical part of it to give medicine its due. There are medicines that we all know have a direct influence upon the uterus. Another point that I want to make is this: I want to be as brief as I can because I know that time is limited. It is in regard to the operation that he spoke of in the latter part of his paper, in which he fixes the uterus by means of a needle put into the skin and goes into the unknown domain. Suppose through the uterus and then out of the skin again and fixes it by a porcelain button or something else. Now, I hold upon general principles that this is bad surgery. Maybe you will get into the intestines.

You do all you can toward putting the patient in a proper position and push up the intestines. Who knows but you have a collapsed intestine? How do you know but you have got an intestine fastened and a puncture of the intestinal canal? There is nobody that can be certain that you have not punctured the intestines. I say, although the doctor is to be congratulated upon the success of the case he reports, still, I hold that is injudicious surgery, to say the least of it. It is a question whether it is better to open the abdomen and see where you have cut it, than to run in the dark and stab a woman in the abdomen and not know what you are doing.

Dr. Beall: I do not feel very much like talking, from an attack of intermittent fever, but I have been so favorably impressed with Dr. Crafford's paper, and feel so thoroughly that he has struck the proper key note of treatment in these cases, that I feel constrained to add a word of commendation to the positions he has taken altogether, and, by way of antithesis, to express a dissent. I am sorry to say, from any position taken by my friend, Dr. Sale. The truth is that while general medicaments may be overlooked too far in the partiality for special local treatment, the truth is that for ages almost, until very recently, the profession had nothing else but tamper

with general medicaments, often aimlessly, and nearly always fruitlessly, and the truth is that this class of cases has become almost a standing opprobrium to the medical profession. There were hundreds of these suffering women—pale, haggard, always complaining, a misery to themselves and a living opprobrium to the medical profession. They were not getting relief, and those who have been enterprising enough to lay aside their prejudices and prospect a little into the appliances and local treatment have been successful. We could take two hours and not exhaust the subject.

I will allude now to this very numerous class of cases which Dr. Crafford in a portion of his paper touched upon, which he calls endometritis and very closely akin to the condition which I read a little treatise upon and which I denominated cervical leucorrhœa. That is a mere symptom by which I meant to indicate uterine engorgement. A lady of about 22 came to me some six months ago—she had been married about two months. She was suffering then as she had been ever since she commenced to menstruate, with hemorrhage and leucorrhœa. She had passed through the hands of many reputable physicians of Louisiana, Mississippi and New Orleans—taking medicine all the time, washes, etc., and all to no purpose. Worse and worse she got every year, and when she got married she took up a little courage and consulted a doctor with a view to local treatment. She had heard something about it in the cases of friends who had got well. Now, for several years menstruation had returned from two to three weeks apart, and had lasted from six to ten days; now, that was the standing chronic condition—leucorrhœa in the meantime. Now, when I heard her story, I concluded I would waste no more time upon general medication. Of course, there is a place for that. I had her under local treatment. I dilated the cervix with sponge tents. Now, the object of a gradual dilation is to set up a gentle and persistent retraction of the uterine fibers. The probability is there is languor, flaccidity of the uterus and engorgement of the blood vessels. When we remedy that we have cured the case. The sponge tent is removed at the end of twenty-four hours and then nitric acid is freely applied to the interior of the cervix uteri. That sets up a copious flow which lasts three or four days. The cavity of the uterus is syringed out every day with hot water, and then the patient can get up and walk around the room. I did that twice, the first time about midway between the two menstrual periods, and between the next two menstrual periods I tried it again, and when the third month came around, I went to see her again, and I told her if she was not quite well I

would like to make another application, and she said, "Doctor, I am perfectly well." I said, "When did you have a menstrual period last?" She said, "About two weeks ago." "How long did it last?" "Between two and three days." "How long since you had no longer menstrual period than that?" "Never before in my life," she said. The red color had begun to take the place of the pallor; she had a house servant when she was able to pay for one, but now she had discharged the servant and was doing her own cooking, and sewing pretty constantly at the sewing machine. That was about six months ago and that lady is perfectly well now. I just instance that as one absolutely of many which I could introduce to your attention by way of emphasizing the necessity of striking at the root of the trouble. If the bowels are torpid, relieve them; if digestion is at fault, relieve that. If you will just turn over a new leaf, take up these cases and act upon this treatment you will never regret it, and your future in dealing with these cases will be a new experience.

Dr. McGee: I expected, sir, when I came to the meeting of this association to hear something new in gynecological surgery, and yet it was right difficult to see where that new came in on this well-lighted field. You have an address from a gentleman from Memphis, presenting a scientific paper which received the thanks of this association, and deservedly so, but I am not at all prepared to endorse the positions he took upon the question under discussion. Dr. Sales very forcibly and clearly expressed the danger of the operation: the great risk we take in penetrating the thick abdominal wall with a curved needle, relying altogether upon the fact, I will say—the womb, it is true, supported by the fingers, the sac pressed upon the abdominal walls as well as can be. Then the assistant, we are told, is expected to move the lapsed intestine between the wall to the womb, but it is impossible, it seems to me, for any one to determine positively whether this intervening viscus is entirely removed: I don't see how we can rely upon it until we have already pinned the womb to the abdominal walls, and then see the dangerous consequences of it too late. It strikes me that a woman is in better condition before that operation than after.

M. J. Thompson, M. D., of Meridian: I fully agree with the doctor in local treatment for endometritis in respect to that operation. I can see but two things that will take the place of his operation, taking the position that there is no displacement to correct except retroversion. Anteversion, I believe, is considered now not to produce any pathological trouble—that is stitching the uterus to the abdominal wall will take the place in the operation of shortened round ligaments, and



I think that is enough to give the operation a place in our gynecology. The most eminent men in the United States have expressed themselves very generally against it—at least, he can mention times where it has failed. Alexander's operation has not become popular, and therefore I think the operation worthy of a trial.

Dr. Crafford: I think my friend Dr. Sales must have been asleep when I read my paper, because I expressly said, "This paper has some points in the treatment of endometritis." He goes on to criticise me for not correcting any condition of the system that may exist: here come up tumors and all that sort of things that might be treated in the beginning. I expressly said that this paper has "Some points in the treatment of endometritis." It was not intended to be exhaustive, but only to suggest four points in the treatment of endometritis. I had nothing to do with the cause of this trouble; I had nothing to do with the diagnosis; I had nothing to do with the prognosis, but merely presented four points in the treatment of the disease, and the paper, even with that, was too long—longer than I wanted to make it. Then I am to be criticised and censured for not writing on the whole circle of uterine pathology at one dash, when I only intended to present four points. Dr. Sales spoke recklessly of the operation and Dr. McGee sanctioned it.

Now, if you have the woman on a high medical table while you are seated on a low chair, with one foot on either side, and let the buttocks come well over the edge of the table, it gives you the greatest obliquity of the pelvis; and then by means of three fingers in Douglas' cul-de-sac push up the uterus until it is opposite the bulge above the pubis, and then by means of an assistant raise the intestines up above. That is an easy matter. Work them up way above the pubis and then there is not much danger of puncturing the bladder, and as a precaution have another nurse to introduce a catheter and draw off the urine. Now you have got your intestines well up, and your bladder well below, and it seems to me it would be a very bungling operator who would run the risk of puncturing them. But suppose you did puncture the intestines, you could take the stick out. The same way with the bladder, provided you observe ordinary cleanliness, and it is much safer than the ordinary case that will do the same amount of good. \* \* \* Here is a case with which you can not do anything unless you improve nutrition in that organ by putting it in a favorable position. Alexander's operation cuts down in the external abdominal ring and cuts this round ligament. You go right to the peritoneum, cut it out, pull it off and stitch it.

I have seen the most experienced operators, men who have performed the operation several times, spend half an hour hunting for that ligament and never finding it. I have made experiments myself in the dead-house and I could not find it. I have seen it sometimes drawn way up and sometimes down. This operation is being abandoned, and it will soon drop out of use pretty much: this is safer and more easily done; if you will only be clean there is no danger. Dr. Polk, of New York, has done it time again, and he says there is positively no danger in the operation. You will see that in the September number of the *American Journal of Obstetrics*. \* \* \*

The danger of stitching it in the wrong place and having the woman bent over in the Grecian-bend style, and urinating every few minutes—that is preposterous.

The adhesions play no part in the case at all. This uterus is immovable: it stays in its normal position because I hold it there with a stitch. Keep that uterus in this position while involution takes place, and it stays there perfectly naturally and does not need anything to hold it there. Now, this operation is supplemental to other measures of relief ordinarily: it is not intended to be done by itself.

The position of Dr. Sale as to its being more dangerous than laparotomy—and I believe that was sanctioned by Dr. McGee, that it depended very much upon where the woman was whether laparotomy would do or not. Perhaps my friend has been in the habit of letting them die without it. It is supplemental to something else, however, and it is not intended even to be done by itself. However, I believe in a great many of these cases, whilst I distinctly stated I believe their displacement is a result of a cause, and is a pathological accident and not a disease *per se*, the diseases can be kept up and the effects become innumerable. In some cases it will cure the disease itself, but it is ordinarily intended to be only a supplemental measure. As to Dr. Thompson on anteversion, I have never known it to be done for anteversion. I think a pessary under these circumstances is like treating a lame man with a crutch: it is very good for the time, but will not cure him. The same way with the woman: if you cure her she will not need the pessary.

Dr. Sale: I rise to a point of personal explanation. It seems that the doctor has to some extent misunderstood the gist of what I was saying. I said, if he goes on to speak of that treatment of endo-metritis, why exclude the medical treatment? He has spoken of the surgical treatment, then why exclude the medical treatment?

Dr. Crafford: I did not want to speak of anything but the surgical treatment.

Dr. Sale: That is what I want to impress on the doctor, that he should not be one-ideal; that he should be a medical philosopher and take into consideration all the means—medicine, mechanical surgery, local treatment, or any other. Cure the patient. That is the one idea before me. \* \* I have seen this operation suggested in the journals, but it never struck me as being feasible or practicable. When you introduce a double 26 wire through the uterus, the doctor says it don't make any difference whether you puncture the intestines or not. It seems that the intestines have accommodated themselves to the fashion and don't come out—it used to be that they did. I have heard of cases of stricture of the intestines from such things; I should be afraid to do so, but in regard to the possibility of determining whether there is an intestine interposed between the uterus and the abdomen, I submit that it is impossible to determine that. The operator puts his hand under on the vagina, and lifts the uterus up, and then the uterus is lifted up against the abdominal wall. When you do that you have got your intestines full of flaps, and then you can't tell whether the intestine is there or not.

If you puncture the intestines it seems to me that there is a deplorable state of affairs. It seems to me that the position taken by Dr. McGee—whenever you pull up the intestines against the uterus you very necessarily lessen the caliber of the bladder. When the bladder is filled with urine, it is going to impinge and rest against that. How long do you keep that suture in there?

Dr. Crafford: About two weeks.

Dr. Sale: In the meantime, if you keep that suture in there where there is any pressure, and there is apt to be pressure, no good will come from it. Have we all not seen suture cuts as the result of it? Then there is the possibility of cutting that uterus in two. I still maintain that it is bad surgery. Let us apply that to ourselves. Would we like our wives and daughters to be treated in that way? I believe there is not a man in this house who would say he would be willing for a member of his family to be treated by that method.

Dr. J. H. Blacks, of Meridian: I did not hear Dr. Crafford's paper read, I am sorry to say, but I presume that he proposed to fix adhesions of the uterus to the abdominal wall by stitching. \* \* What is the object of holding it there two weeks? It does not seem to me that two weeks would cure any form of displacement; you can hold it in place six months with a pessary and it will not do it. I thought he proposed to open the



abdomen and stitch the uterus to the abdominal wall, but if the doctor proposed to keep the uterus up by running sutures through the abdominal walls, and keeping it there two weeks expecting to cure the case—if he has done it and cured it I am glad to know it, but I would not expect such a result as that. But whether it is practicable or not? I say it possibly could be done, but I say that with the chances of having bad results with such a thing it would be far better to adopt some other method which would promise more, to say the least of it. If the uterus is hopelessly prolapsed, of course the woman is almost ready to submit to anything, and I think that is about the case. You rarely have them in women who have not borne children. I see them occasionally, but it is usually the result of pregnancy. Anyhow, these ligaments have lost their tendency to become elongated by pregnancy. I have been in the habit of narrowing the vagina almost from the cervix down.

Dr. Crafford: Dr. Blanks, I am sure, was not here when the paper was read. He has entirely misconstrued the paper. The paper has no such idea as dealing with displacements in general. It only spoke of dealing with displacements in so far as they had to do with the treatment of endometritis. It had nothing to do with relaxing or anything else. I believe, if you will diminish the weight from this womb and give them involution from whatever cause you may—that this means of holding it up and giving these ligaments a rest so that they can have tonicity restored to them—you will very materially lessen that displacement, and especially will you do it if you hold it in its position, so when you get this rapid involution after other operations you will be sure to do it. As for operations upon our wives and daughters—I don't think there are many men that will do operations that they are not perfectly conscientious about. This operation was established for a year or two, and I simply reported a case as taking advantage of that ground to cure endometritis. Very few men in New York, in the gynecological school there, have not done it; it is done in Europe and all over the country. It is a legitimate operation and is rapidly taking a place in this country. I do not look upon it as an experiment, and I do not think there is any want of conscientiousness upon the part of the operator. This is a legitimate operation, and certainly has a place in the medical profession.

THURSDAY, 3 P. M.

Remarks by different members of the association on the present mode of examination of applicants for license to practise medicine.

Paper by Dr. Phares: Report of a trial for rape in Wilkinson county. No discussion.

Dr. T. T. Beall, of Vicksburg, was found guilty of violating the code of ethics by having printed in the dailies of his city a synopsis of papers he intended reading at the Association, and the Judicial Council recommended a public reprimand by the President, which was given.

The association adjourned to meet in Meridian the third Wednesday in April, 1891.

W. E. TODD, *Secretary.*

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GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE,  
MARYLAND.

DECEMBER MEETING.

\* Vice President, Dr. Chas. H. Riley, in the chair.

Dr. Wm. E. Moseley related the following case:

Mrs. Maggie G., a light colored woman, about 30 years of age, twice married, had had two children by her first husband. Had suffered much during the past twelve years from dysmenorrhœa; had been unable to do ordinary work.

Examination showed the uterus to be retroflexed and firmly bound down, but the character of the adhesions could not be definitely made out. There was an irregularly shaped elastic mass in the position of either tube diagnosticated as cystic ovaries, together with chronically inflamed tubes. All the pelvic tissues were very sensitive to pressure. There was a deep, double laceration of the cervix, and a lacerated perineum with very lax vaginal wall, but only slight rectocele.

When the abdomen was opened the mass on either side of the pelvis was found to be composed of a cystic ovary and the corresponding tube firmly matted together by old organized adhesions, each mass being firmly bound down to the pelvic wall by numerous strong adhesions, many of them being recent. There were also adhesions to the omentum. The left ovary ruptured before it could be removed. The mass in the right side appeared to be a large hematosalpinx, but examination proved it to be an ovarian cyst, into which blood had entered from a ruptured graafian follicle. The adhesions behind the uterus were very broad, strong bands, and were pulled off the uterine walls. All possible care was used to secure the patient against hemorrhage, and the abdomen was douched out with hot, boiled water until the return flow was, practically, colorless. A glass perforated drainage tube was introduced to the bottom of the

cul-de-sac, and the incision closed about it. The douching and the extreme difficulty of separating the adhesions prolonged the operation to about one hour and a half.

Although stimulants and artificial heat were applied, no reaction could be obtained, the temperature never reaching 95 deg., and the patient died about six hours after the operation, apparently from shock. At no time was there any discharge of blood, or even bloody fluid from the drainage tube. Dr. N. G. Keirle, however, kindly examined the pelvic cavity, *post mortem*, and reported that death was due to hemorrhage, the exact source of which could not be made out. Dr. J. Whitridge Williams kindly furnished the pathological report, which will be given below.

#### DR. THOMAS OPIE EXHIBITED A PLACENTA

That he had gotten a few hours before the meeting from a case of placenta previa.

The patient was 35 years of age, and had borne one child previously. When he first saw her she was blanched and exsanguine. The blood flow began three days before with a loss of a quart, and continued with more or less rapidity up to the time of operation. Her confinement was not expected for two weeks. When first seen by him, there were some rhythmical pains and some dilation. The cervix was dilated with the fingers and cone of the hand; the placenta was detached with a sweep of the forefinger around the cervix, the bag of waters was artificially ruptured, and traction-rod forceps applied. The child was delivered in fifteen minutes without further loss of blood; the placenta coming away simultaneously with the birth of the child. Though the position was occipito-posterior, there was no laceration of the perineum, and the child was unscathed. Both mother and child were left doing well.

Dr. Opie also exhibited a specimen of an ovarian tumor which he had recently removed. The tumor had developed into the epigastric region, and the abdomen was about as large as it would have been at the full term of pregnancy. It took two hours to break up the adhesions, which were very dense between the tumor and the intestines, and between the tumor and the omentum. The second tumor was taken from the pelvis. It was ovoidal in form, about seven inches in length by five inches high and four inches thick. It was removed entire, and upon section it proved to be a dermoid growth. There was no history of peritonitis to account for the extensive adhesions. The patient had never had a day's discomfort other than from the size of the cyst. She did not know until four months ago that she had a tumor. The material in the



large cyst was colloid. Notwithstanding the extensive adhesions, the length of time consumed in breaking them up and the injury resulting from the operation the patient has made a good recovery, this being the seventeenth day after the operation.

Dr. Howard A. Kells: The term colloid is often used in two senses. An incorrect use, describing the yellowish, more or less opalescent, thick material often found in ovarian cysts; it is employed in such cases as more or less synonymous with gluey. The other use of the term is to describe a rare condition in which the contents of the cyst are more like calf's foot jelly and have a vitreous fracture; they are with great difficulty removed, clinging to everything. This latter is true colloid, and when found such tumors are of a suspiciously malignant character. We should limit the use of the word to the latter condition.

I wish to refer to two minor matters of interest suggested by this specimen of placenta previa. The position which the placenta has occupied in the uterus can accurately be determined by the position of the opening in the membranes made by the passage of the child, inasmuch as the fundus uteri must of necessity be just opposite to this perforation. We can, therefore, by reconstructing the membranes, see just in what part of the uterus the placenta lay. In one of my cases of placenta previa there was no hole at all in the membrane, as I had extracted the dead child through a perforation in the placenta. We can do still more than this in the way of a diagnosis with the membranes. By allowing them to be expelled untouched into the bed, and carefully observing their exact position, we can tell as well on which side of the uterus the placenta was attached.

The second point is that we may have hemorrhage in placenta previa without being able to detect a placental margin, owing to a low attachment of part of the placenta, near the internal os, below the contraction ring, but not over the hole of the cervical canal. The lower part of a placenta thus attached is separated by the opening up of the lower uterine segment.

Dr. L. E. Neale said: Although Dr. Kelly has alluded to a point of some interest, it is of far more practical importance to recognize placenta previa prior to its expulsion, and as far as he knew this could only be done with certainty by digital examination; partial placental separation and rupture of the membranes during labor in cases of placental previa was outlined by Marceau as early as 1668, but was fully described by Puzas in 1759; he saw nothing in the history of the present case, as related by Dr. Opie, that contradicted the method of Braxton Hicks, a method that up to the present time had

given by far the best results, viz:  $4\frac{1}{2}$  per cent. maternal mortality. If this method when practicable could be performed earlier than delivery by any other method, and was not difficult and gave the best results, why not have applied it in the present case?

Dr. Wilmer Brinton asked why Dr. Opie objected to the tampon in cases of placenta previa; he thought no arbitrary law could be applied.

Dr. Opie said, in closing the discussion, that results of operative procedure depended largely upon the skill and familiarity of the operator with the special operation resorted to; in the first case of placenta previa he had attended he had turned and lost both mother and child: with rapid dilatation and forceps he feels that he has command of the situation, and having resorted to that method repeatedly, had gained greater skill and done better work. While Dr. Neale might do better by some other method, he is fully satisfied that he does best himself with the forceps; he is opposed to the use of the tampon because it conceals what is going on; it is not best to wait for pains. He is in favor of rapid dilatation and delivery in placenta previa, in puerperal eclampsia and in abortion; to put in a tampon and go away is hazardous; the tampon is of very little help in hemorrhage.

Dr. Kelly read a paper upon "*The Examination of the Normal Pelvic Viscera*," describing various bimanual and tri-manual methods of palpating the normal ovary.

Dr. Wm. P. Chunn: When speaking of what should be found or can be found at an examination, it is necessary to consider the circumstances under which the examination is made. Office examinations are the most usual, and all the facilities are not usually at our command, and this circumstance should be specified and taken into account. Certain advantages in methods give certain advantages in results. Of course when the woman has no ovaries, or when the ovaries are not in the pelvic cavity, they can not be palpated.

Dr. Hunter Robb: I thoroughly agree with Dr. Kelly that the normal ovary can always be palpated under an anæsthetic, and also that in a large number of patients the ovary can be outlined without anæsthesia. Four years ago Dr. Kelly taught me the method of examining the ovary by invaginating the perineum, and I can testify to its utility. This lengthens out the examiner's finger, and thus enables the practitioner who has a short finger to accomplish it with almost the same facility as a longer one. The corrugated tenaculum devised by Dr. Kelly may be used to advantage with nulliparous patients to

define the uterus and its appendages still further. No one, of course, would think of using it in inflammatory conditions of the pelvic cavity.

Dr. B. B. Browne said that he had listened with much pleasure to Dr. Kelly's paper, and congratulated him upon the admirable manner in which he had systematized these valuable methods of pelvic examination—methods which most of us had been using in our gynecological practice for several years; he generally preferred the use of two fingers in the vagina, as he could thus make a more satisfactory examination of the tubes and ovaries than with one finger; in many cases a more accurate idea of the adhesions can be had by getting the finger above the ovary and fixing it between the finger and the spinal column; pulling down the uterus aids diagnosis very much.

Dr. Opie said that there were few objections to Dr. Kelly's paper, but it seems that the elbow on the hips is incompatible with delicacy of touch; the law as expressed by Martin being—"The more lightly the parts are touched the easier the goal is reached, and the less the force that is employed the more distinctly things are felt;" he thinks it a cruel sort of thing to drag an organ out of its position, and would like to know how much displacement can be made with the tenaculum without producing dangerous trouble; for example, cellulitis, metritis, and injuries to the periuterine tissue; he had met a number of cases in which he had not been able to make out the ovaries; Dr. A. Martin says he can palpate normal tubes, but Dr. Opie has never been able to reach that degree of perfection.

Dr. Neale referred to the possibility of tracing out the uterus through the anterior vaginal wall, as had been demonstrated to him by Dr. Kelly at the Hopkins Hospital clinic; he had no doubt that in a large majority of cases the normal ovary could be displaced out of its normal position and palpated or touched with ease through the vaginal walls. He believed that a great deal of difficulty in an ordinary gynecological examination was due to the fact of neglecting to empty the bladder or to employ the rectal touch.

Dr. H. P. C. Wilson said there were a large number of women in whom he was sure he could not palpate the ovaries, and he was doubtful if any one could do so. The uterus is often found fixed in the pelvis as in a mass of putty and no definite outlines can be made out; in other cases the abdominal walls are from two to three inches thick with fat, and in such cases he had failed to find the ovaries.

Dr. J. Whitridge Williams said that he could certainly feel the ovaries in four cases out of five, and that he had succeeded occasionally in finding the ureter.



Dr. Moseby: The old teaching is that the ovaries can not be palpated in their normal position. When an ovary can be found by an ordinary examination its location may fairly be considered as abnormal. If Dr. Kelly's idea, that all men who can not make out normal ovaries should be thrown out of the specialty should be enforced, a large number of experienced and thoroughly informed specialists would be excluded from practice. It is practically impossible to examine every patient thoroughly enough to make out the normal ovaries, in office examination. In dispensary and more especially in hospital practice the case is very different.

Dr. Browne thinks that the cases in which the ovaries can not be felt are the abnormal cases; if the symptom point to an examination of the ovaries they can be made out, but if necessary an anæsthetic should be given.

Dr. Kelly, in closing the discussion, said that he examines every case coming to him from vulva to ovaries, making a special note of every important organ.

When the patient complains of permanent pelvic pains the examination is never considered complete, or the diagnosis even, without a special note as to the condition of the ovaries. I have even asked about examining the ureters by palpation. They can be felt in almost all cases, being distinctly traced from the anterior part of the pelvis back to the side of the uterus. Pressing upon a diseased ureter causes a desire to pass water, if not irresistible. I prove that this structure is a ureter by catheterizing it. The catheter can be felt through the vaginal wall outside the bladder, in the ureter, and the urine collected as it comes down from the kidney drop by drop. The fallopian tube can often, but not always, be made out.

The amount of displacement of the uterus which can be made without injury is considerable. In normal cases it can easily and without harm or pain be brought down to the vaginal outlet. When there is fixation, gentle traction can be made until pain is felt. In these cases I use traction with the corrugated tenaculum, and then pushing up the fundus with the finger, practise massage, stretching the adhesions. I am sure that the downward traction to the vulva without pain never does any harm.

Dr. J. Whitridge Williams' remarks upon the pathological experiences submitted to him by Dr. Mosely, Dr. Wilson and Dr. Opie:

"The specimens submitted by Dr. Mosely are of considerable interest, and consist of the uterine appendages from both sides. The specimen from the left side consists of the fallopian

tube, ovary and part of the broad ligament. The tube was completely occluded at its fimbriated end, but otherwise presenting nothing abnormal except numerous small adhesions. It contained a very small amount of dirty yellow fluid, consisting of columnar ciliated epithelial cells and numerous disintegrated cells. The ovary was considerably torn and covered by very dense adhesions, while the broad ligament presented nothing of note. The specimen from the right side was an irregular mass of tissues about  $5 \times 4 \times 1\frac{1}{2}$  cm., consisting of the tubes and ovary imbedded in dense adhesions. At first glance the mass appeared to be composed of two parts, a large, solid anterior portion covered by dense adhesions, and posterior to it a cystic structure about  $4 \times 1\frac{1}{2}$  cm. in size. This had a bluish color, thin wall, and was intimately connected with the rest of the mass. Imbedded in adhesions a piece of the ampullar end of the tube was found, which could be traced for about 4 cm. and then lost itself in the mass, and appeared to have no connection with the above mentioned cystic portion. The main portion of the mass on section was shown to be composed of ovarian tissue, which was covered and completely hidden from view by very dense adhesions, and contained two tolerably fresh corpora lutea about  $1\frac{1}{2}$  cm. in diameter. The larger of these corpora lutea communicated by a small opening with the cystic portion above mentioned, which contained a thin, reddish watery fluid containing blood cells. On cutting open this cystic portion, its walls were found perfectly smooth, with several smaller cysts projecting into it. These varied in size up to 2 cm. in diameter, and were filled with a clear watery fluid, and arose directly from the ovarian tissue.

“On examining the scrapings from the walls of these cysts I found that they were lined by a layer of almost flat cuboidal cells, which were distinctly ciliated. These cysts could not have originated in the tube, as was readily demonstrated by their arrangement in relation to the larger cyst, and by the lining epithelium, which was totally different from that of the tube. Their small interior precluded the idea of a ciliated papillary cystoma: and the only probable thing for them to be were dropsical graafian follicles which had been prevented from rupturing by the dense adhesions covering them, and so attained their large size. The fact that they were lined by ciliated epithelium is not at all opposed to this supposition; for cilia have previously been found in the dropsical graafian follicle, as was shown by VanVelits, of Budapest, about a year ago, and as I found, altogether independently of him, last spring. But as yet I have not made a sufficient number of observations to

assert that all dropsical follicles are lined by ciliated epithelium. The blood in the large cyst in all probability came from the corpus luteum with which it was connected. The adhesions about the ovary were particularly dense and resisting. The diagnosis from the specimen is pelvic peritonitis, with adhesions binding down the adnexa on both sides, particularly the right side, with several very large dropsical graafian follicles.

"The specimen submitted to me by Dr. H. P. C. Wilson was a small myoma about three cm. in diameter, and save on one surface a piece of vaginal mucous membrane the size of a two-cent piece. The tumor was submitted to me to decide whether its origin was from the anterior fornix or from the uterus itself. Sections made through the tumor and the vaginal mucous membrane readily showed it to be a myoma which was separated from the submucous tissue and epithelium by numerous bands of non-striated muscular tissue. From the presence of muscular fibers between the tumor and epithelium, I think we are justified in concluding that it was not of vaginal origin. Now if of vaginal origin, it should arise from the submucous tissue and be immediately adjacent to the epithelium, and not separated from it, as it was in this case, by muscular tissues. Force is lent to this conclusion by the fact that vaginal fibroids are very rare indeed, and many of the reported cases, especially fibroids from the anterior fornix, had their origin in the anterior wall of the uterus instead of the vagina.

"The specimen submitted by Dr. Opie was a greatly hypertrophied posterior lip of the cervix, which measured five centimeters in length and two centimeters at its broadest part. Microscopically it was found to consist of almost normal cervical tissue, with only a very slight increase of the connective tissue. Except at its cut surface the entire mass was covered with the usual stratified epithelium.

"Generally speaking we may distinguish two forms of hypertrophy of the portio-vaginalis—follicular, and diffuse or simple hypertrophy. The first form is due to an increase in number and size of the cervical glands, with frequent retention of their contents, and is quite frequent, but never attains a very great size, and is readily distinguished by its nodular appearance. The diffuse or simple form of hypertrophy is far more important. In this there is a general increase in all the elements that compose the cervix, though there may be a slight increase in the amount of connective tissue, as there was in this case."

Dr. Howard A. Kelly read a paper upon the palpation of the *normal uterine appendages* (published in full in the February number of the American Journal of Obstetrics). He stated that the normal uterine appendages could always be pal-



pated. There are two avenues of approach, by the vagina and by the rectum, and three ways of utilizing these avenues. First, with one hand; second, with two hands employed bimanually, either by vagina or rectum, and, third, the trimanual method, by vagina and by rectum.

First, the examination with one hand is unsatisfactory, and the ovary can not even be felt unless abnormally displaced downward into the recto-uterine pouch.

Second, the success of the bimanual examination depends upon the downward pressure with the external hand displacing the abdominal walls in the direction of the ovary to be palpated, and thus affording a resistant plane against which the ovary can be felt by the internal hand. The internal hand must be used to invaginate the perineum, which is thus displaced upward into the pelvis. This invagination gives the examining finger, even though it be a short one, the necessary length. One, often even two inches, are thus gained to the palpating finger. Care must be taken in making the pressure necessary to produce this invagination not to stiffen all the muscles of the forearm, thus impairing the tactile sense.

The rectum is of all others the best avenue for approaching the structures lateral to the uterus, affording as it does a wide open channel throughout the whole length of the pelvis.

Where the structures can not be reached at once through the rectum, they are brought within easy touch by bringing the uterus and ovaries into an *artificial retroposed* ante flexion, the mechanism of which was carefully described by diagrams.

Dr. Kelly had, in this way, palpated fibroid tumors on the posterior surface of the uterus near the fundus, not as large as a pea. Third, the trimanual examination is conducted either by the vagina or by the rectum and vagina, assisted with the hand above. The peculiarity of this method is an *artificial descensus uteri*. The uterus is grasped with a pair of bullet forceps and drawn downward until the cervix is seen at the vaginal outlet, and while an assistant holds it in this position, the gynecologist uses his hands bimanually. To obviate the employment of an assistant, Dr. Kelly has invented an instrument, which he calls the corrugated tenaculum, flattened and roughened so that it can be readily held between the last phalanges of the third and fourth fingers and the ball of the thumb, while the index finger of the same hand, assisted by the abdominal hand above, is engaged in making a vaginal or rectal examination.

By one or the other of these methods, the uterus, broad ligaments and ovaries and tubes are within reach of a most thorough and searching examination, revealing at once the smallest abnormalities.

WILLIAM S. GARDNER, M. D., *Secretary*.

## TENTH INTERNATIONAL MEDICAL CONGRESS.

## SECTION OF OBSTETRICS AND GYNECOLOGY.

*Antisepsis in Midwifery.*

## DISCUSSION.

Dr. Galabin, of London (being the reporter on this subject), said that he laid much stress on the introduction of sublimate into obstetrics. A comparison of the results obtained during the periods in which carbolic acid and the permanganate of potassium were in use with those realized since the introduction of sublimate showed that the mortality in the English clinics had sunk from 10 to about 2 per cent. The cases of slight increase of temperature were now reduced to the half of the number of the previous cases, and as to septic affections the chief results of the London hospitals went to show that the number had considerably decreased, viz: from 40 per cent. to  $2\frac{1}{2}$  per cent. A solution of sublimate of 1:4000 had usually proved strong enough, and it was only in the first 3 to 4 days that we need have recourse to a solution of 1:2000. In private practice the same principles must be observed for the disinfection of the hands and the instruments as in the clinic, namely, no examination without a previous disinfection of the hands with 1 per cent. solution of sublimate.

In the case of normal deliveries one single washing of the vagina with sublimate 1:2000 after the expulsion of the after-birth was sufficient, whereas injections with carbolic acid (from 2 to  $2\frac{1}{2}$  per cent.) should be used during the whole puerperal process.

After serious obstetrical operations, washing with sublimate should at least be practised for four days. At the conclusion, Dr. Galabin stated that in private practice a thorough disinfection of the hands of the physician and the midwife was of the greatest importance.

Dr. Slawiauski, of St. Petersburg (being the second reporter on the subject), reported on the influence of the antiseptics on the morbidity and the mortality in the Russian obstetrical clinics, and also presented detailed statistics referring to the deliveries and the subsequent affections in fifty-two obstetrical hospitals.

Basing himself on his statistics the author arrived at the following conclusions:

1. Antisepsis is used on the largest scale in the obstetrical hospitals of Russia, so that the puerperal morbidity and mortality is diminishing in these hospitals from year to

year, and now presents quite satisfactory results, namely, for the year 1889 the puerperal affections amounted to 6.90 per cent. and the puerperal mortality to 0.28 per cent.

2. When antiseptic precautions were used quite strictly the presence of the students, the nurses, etc., should not have any influence on the morbidity and the mortality in the obstetrical hospitals.

3. When antiseptic precautions were carried out on a uniform scale the proportion of the numbers of morbidity and mortality depended on the frequency of the pathological operative and complicated deliveries in the hospitals.

Large obstetrical hospitals, in which strict antisepsis is observed, are of a greater utility to the country than small obstetrical asylums.

Dr. Stadfeldt, of Copenhagen, also believed that antisepsis should be thoroughly carried out, and that the obstetrical clinics should not only serve for instruction, but that they should, at the same time, be real humanitarian institutions, and as a proof for his statement referring to antisepsis, he quoted exact statistics relative to the mortality of infectious puerperal diseases in most of the Scandinavian obstetrical hospitals. The principle of erecting affiliated hospitals under the direction of town officers, who were subordinate to the chief obstetrical hospitals, was not only useless, but also dangerous, as an scrupulous observance of antiseptics could be much more easily secured in the hospitals than in the affiliated institutions.

Also for new born children the introduction of antisepsis into widwifery was of a very great importance. The death rate of new born children in the obstetrical hospital of Copenhagen, owing to septic processes, had considerably decreased since the introduction of antisepsis, and no cases of "trismus neonatorum" had occurred in the hospital for more than twenty years, and were observed only sporadically in the affiliated obstetrical institutions. In private practice the nurse must keep her person, clothes and apparatus quite aseptic, and the most scrupulous cleanliness must be observed. The external genitals must carefully be examined before examination. The question now arose as to whether the prophylactic washings of the vagina "in partu" by the nurses, did not do more harm than good. If the washings of the vagina and the uterine cavity were to be of use in private practice, they must be carried out with such an energy and under such measures of precaution, as could not be expected to be done by the majority of the nurses.

The apparatuses for irrigation were on the whole dangerous apparatuses for nurses, for they could only with difficulty be preserved in an aseptic condition.



As to the method of rendering nurses and the confined women aseptic, the chief point lay in an exact and energetic brushing and washing out with the chemical disinfectant remedies; the lecturer recommended solutions of sublimate (1:1000) for the hands, and a 3 per cent. carbolic solution for the confined woman and nurse. Creolin had proved less favorable than the other drugs.

The chief matter of importance was the external examination. It would, however, be dangerous, if the nurses were directed to make only an external examination. This would not always be attended with quite reliable results. The nurses would thus become very easily "mere machines of routine" so that it would be more advisable to teach the nurses the importance of an exact disinfection than to limit their work to the external examination alone.

As to the treatment of the after-birth, the lecturer was of opinion that the expectant method prolonged the period of birth and presented a greater disposition toward retention than a slight massage of the uterus or a careful expulsion or detachment of the after-birth. In conclusion, Dr. Stadfeldt asked that even slight cases of puerperal fever should be made known to the authorities, by the nurse as well as by the physician.

Prof. Fritsch, of Breslau, wished first to establish the sentence that in the case of healthy nurses any local treatment had to be set aside, provided that the cleaning of the external genitals was not already called a treatment. The question could now arise as to whether it would not be more advisable in the case of low fever to use at once all reliable antiseptic and antipyretic remedies and methods, locally and internally, than, by abstaining from any intervention, to overlook the right moment of a life-saving therapy. And, indeed, there are still physicians who also in the case of slight fever immediately order a vaginal washing to be made. It must be stated that slight fever, particularly in the case of "primaparæ," in and outside the clinic, is met with very frequently. Such cases become good in a very short time. It would be too much if we should immediately practise irrigations, as in those cases in which the general condition was quite undisturbed and in which the elevated temperature could scarcely be diagnosed without the thermometer. When making irrigations, small wounds are mechanically produced by extension of the vagina, by elevation of the uterus, or directly with the tube; an absolute cleaning or sterilization of the vagina, respectively, could not be obtained.

When the washings are not made carefully, when they

were not carried out methodically and repeatedly, the disinfectant remedy disappears, it flows out, and is chemically decomposed or resorbed before all the germs are killed. New bodies came down from above, these being other nutritive germs, decomposition rapidly occurs, and the many small wounds absorb the germs. Hence, by practising one single washing, particularly if this is done by an unskilful hand, only mischief could be caused. There is no doubt that these evils could be met by regular irrigations practised every two hours in a careful and skilful manner. This method, however, would trouble the nurses too much, and it is, moreover, painful, irritates the mind, takes much time, is troublesome for the medical practitioner, and in medical practice in the country it is not even practicable. It seems, however, dangerous to teach and to ask methods of treatment which can be carried out only in a well arranged hospital, with well educated assistants and many servants.

Prof. Fräsch prohibits the nurses from doing any washing during the puerperal period, but he does not mean to say that the medical practitioner alone is able to practise a washing, but because *no. alone*, can determine the right indications, and he must decide as to whether a washing should be practised or not. In the case of low fever the so-called resorption fever, nothing more is thus to be done than directing careful attention to the case; but in high fever, intra-uterine washings are indicated. Here, an energetic therapy is justified and necessary, and its task consists in strengthening the organism, secondly in removing substances whose resorption is dangerous, and thus simultaneously disinfecting the surface which is already infected and is being resorbed. The generally strengthening remedies, such as wine, beer, cognac, eggs, beefsteak, etc., are not, however, useful when a large quantity of infectious matter is lying in the uterus and the vagina continually, which steadily increases and becomes resorbed.

By the washings of the uterus two objects are attained; the already formed noxious matter is removed; the formation of new poisons is prevented, and medicaments are introduced into the tissues which continue to exert in the very tissues a germicidal influence.

Dr. Döderlein, of Leipsic, said that he thought that the bacteriological examinations of the vaginal secretions were important with reference to the question as to whether an internal disinfection of the woman in labor was possible or not.

If one examined the vaginal secretions of pregnant woman, one finds two types of bacteria. One of these represents a

particular sort of secretion of a strong, sour reaction, which only contains bacilli. This is the secretion of the healthy vagina.

The great acidity of the secretion hinders the development of the ubiquitous germs which enter the vagina, so that only certain species of harmless bacilli could thrive therein.

The second type represents a thin alkaline secretion in which cocci are contained in a very great numbers, which thrive very well in the alkaline secretion.

This secretion represents one of the infectious sources in the case of deliveries in which an internal examination must be practised.

The women in labor of the last class ~~must~~ be disinfected internally.

## EDITORIAL ARTICLES

### CASES TREATED BY KOCH'S METHOD AT THE AND THROAT HOSPITAL.\*

NOSE

Through the courtesy of the Commission the editors have been able to obtain the following synopses of the cases under treatment which will give a general idea of the character of the cases and the course of treatment. Full reports will be published in the next issue of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

#### CASE I.—TUBERCULAR LARYNGITIS AND INCIPIENT PHTHISIS.

Edward W., aged 36, born in Kentucky. Had hæmoptysis on December 31, 1879, while under the influence of alcohol. No other hemorrhages until 1885, during which year he had eight hemorrhages in the course of two weeks, which he arrested with salt and vinegar. Hemorrhages not profuse, and

\* As soon as Dr. Koch's experiments were made public to the medical world the executive committee of the Eye, Ear, Nose and Throat Hospital determined to obtain, if possible, a supply of lymph in order to test the merits of the new remedy. With this object in view, cablegrams were immediately sent to Berlin, where efforts were made in different directions. Meanwhile, a commission composed of Dr. A. W. de Roaldes, one of the surgeons in charge and laryngologist of the institution, Dr. P. E. Archinard, instructor of bacteriology and microscopical anatomy, Medical Department Tulane University of Louisiana, and Dr. Rudolph Matas, consulting surgeon of the institution, with the assistance of Dr. W. H. Blanc, the consulting dermatologist; Dr. A. McShane, the pathologist; Dr. C. Powers, resident surgeon, and Mr. C. J. Landfried, M. D., was organized to secure proper cases and carry on the experiments. On the 10th of December a telegraphic message was received by Mr. A. J. R. Landauer, Belgian consul in this city, announcing that a supply of lymph had been forwarded by mail to the Eye, Ear, Nose and Throat Hospital, where the precious package was delivered on January 9, through the kindness of the above-named gentleman. It was obtained in Berlin from Dr. Libbertz, with the help of Dr. H. Stettiner, assistant of Prof. Bergman.



of doubtful diagnostic value. Had other hemorrhages in 1888, 1889 and 1890. Lost weight progressively; night sweats, diarrhœa, tubercular deposit in left lung; sputum contained bacilli tuberculosis. Larynx: extensive ulceration of both vocal cords; pyriform swelling over arytenoid cartilages, especially on right side; congestion of epiglottis and base of tongue.

January 15, 1891, 10:15 A. M., one milligram of Koch's fluid was injected in right infrascapular region. January 16, 9:35 A. M., two milligrams were injected in right lumbar region. No red areola around site of first injection. January 17, 10 A. M., five milligrams were injected in left lumbar region. January 18, 10 A. M., ten milligrams were injected in right lumbar region. January 20, one centigram was injected in the left lumbar region. January 22, as there was no marked reaction from last injection, another centigram was injected in left lumbar region. No albumen in urine at any time. See chart No. 1.

January 23, 1891, patient much better. Voice markedly improved; laryngoscope showed the surface of diseased tissues clean and granulating, grayish secretions. Dysphagia much relieved. Bacilli have disappeared from sputum.

#### CASE II.—SUSPECTED INCIPIENT PHTHISIS.

John F., age 14, born in New Orleans, of direct French descent. No history of cough or hæmoptysis. He and his older brother are the only remaining members of a family of nine, including the parents. His parents and his brothers and sisters succumbed to pulmonary tuberculosis; his surviving brother is in an advanced stage of consumption.

The patient himself is in a condition designated as the "pretubercular stage." There is diminished vesicular murmur and prolonged expiration at apex of right lung. Incipient tubercular invasion was feared, but the physical signs were wanting; no coughs, no expectoration, no emaciation, and apparently in perfect health.

|             |              |                           |                                                  |
|-------------|--------------|---------------------------|--------------------------------------------------|
| January 15, | 10:30 A. M., | $\frac{1}{10}$ milligram. |                                                  |
| January 16, | 9:38 A. M.,  | 2 milligrams.             |                                                  |
| January 17, | 10:30 A. M., | 5 milligrams.             |                                                  |
| January 18, | 10:00 A. M., | 10 milligrams.            | (Red areola over seat<br>of previous injection). |
| January 20, | 9:14 A. M.,  | 10 milligrams.            |                                                  |

No albumen at any time.

This case was selected for treatment in order to make manifest any possible latent tubercular processes.

The chart is specially instructive as showing the marked reaction that may follow the injection of the fluid in persons apparently healthy, and is of special significance in connection with the remarkable tubercular hereditary history.

#### CASE III.—INCIPIENT PHTHISIS.

V. P., age 34, laborer, born in Palermo, Italy, of medium build, and slightly emaciated. Improving markedly under ordinary treatment. No ascertainable hereditary history; perfectly well eight months ago when he began to cough. Physical signs positively indicated infiltration of right apex. Sputum contained a few bacilli tuberculosis. Temperature normal before treatment. Weight (naked) before inspection, 116 pounds.

|              |             |                                             |
|--------------|-------------|---------------------------------------------|
| January, 15, | 9 A. M.     | 1 milligram.                                |
| January, 16, | 9 A. M.     | 2 milligrams.                               |
| January, 17, | 10:13 A. M. | 5 milligrams.                               |
| January, 18, | 9:13 A. M.  | 10 milligrams. (violent chill at 4:15 P. M. |
| January, 20, | 9:20 A. M.  | 10 milligrams. (scanty urine)               |
| January, 22, | 10 A. M.    | 20 milligrams.                              |

Instead of fever, in this case, there was marked hypothermia after the first injections; febrile reaction occurred after the large injections. Marked depression after earlier injections. Also cough slightly increased, expectoration not changed in quantity or quality, but all these symptoms decidedly improved after last injection.

#### CASE IV.—WHITE SWELLING OF KNEE.

Joe P., age 5, born in New Orleans, son of V. P. (see case III). Six months ago, child fell and injured left knee slightly. Accident not regarded as serious, and no professional advice was sought, but the child limped from that day. The knee began to swell gradually and became painful. The patient became progressively worse and developed the typical appearances of tubercular arthritis of the knee. The disease appears to be limited to the synovial membrane. January 14, 1891, before injection, circumference of diseased limb above patella, 8½ inches over patella, 9 inches; below patella, 7

inches. Normal limb. Above patella,  $7\frac{1}{2}$  inches: over patella, 8 inches, below patella, 7 inches.

|                             |                            |
|-----------------------------|----------------------------|
| January 15, 10 A. M.....    | $\frac{1}{2}$ milligram.   |
| January 16, 9:10 A. M.....  | 1 milligram.               |
| January 17, 10:05 A. M..... | $1\frac{1}{2}$ milligrams. |
| January 18, 9:14 A. M.....  | 5 milligrams.              |
| January 22, 10 A. M.....    | 5 milligrams.              |

Urine scanty after first injection, but not albuminous. Slight increase of swelling and great increase of pain and tenderness in knee after each injection of five milligrams (see chart). In this case the general condition of the patient became most serious, and even alarming, after the second injection of five milligrams; his pulse became very weak and rapid, 168 per minute.

January 27, joint less painful, softer and more moveable.

#### CASE V.—LUPUS VULGARIS FACIÆ.

Sam D., full-blooded negro, age 17. Lupus began on side of jaw five years ago; has extended over left side of face and neck and nose. [Figures taken from photographs showing the face and neck will be given in our next issue, together with the detailed history of the case.—Eds.] Papular eruption on abdomen. No syphilis. Before inoculation, temperature was normal.

January 15, 1891, at 9:20 A. M., one milligram of the fluid was injected into the back between the scapulæ. Twenty-four hours after two milligrams were injected into right lumbar. A dusky areola around point of first injection. On January 17, five milligrams were injected into the left lumbar region.

January 17, 6 P. M., urine contained much albumen and many bloody and purulent casts, also numerous free colored corpuscles and leucocytes.

No more lymph was injected. Patient reacted very violently. For temperature see chart.

After the injection the face was much swollen around the seat of the eruption; the left eye was almost closed on account of the œdema of the eye lids, and the lips were greatly swollen, especially the upper one.

January 25, marked œdema of frontal region.



January 28, for past ten days patient has been very ill. Urine loaded with albumen and some blood, though both have diminished during past three days. Suppression of urine treated with one-fourth grain of pilocarpin hypodermically and elaterium by the mouth. These have acted well, and patient is vomiting less and taking more nourishment. A marked change for the better has occurred in the lupus patch. The tubercles are nearly all gone, and large crusts have dropped off. The verrucous condition, marked at first, has disappeared.

### KOCH'S TREATMENT—OR DIXON'S?

The excitement that attended the first experiments of Koch's fluid in tuberculosis has given way to a feeling of calmness, in which just conclusions may be drawn as to the probable permanent value of the so-called lymph. The first reports published were eagerly scanned by all medical men. These reports showed that the "lymph" certainly had a powerful and selective effect upon tubercular matter, and contributed not a little toward strengthening the already great confidence in Koch felt by the lay and medical world, and in leading men, to hope that the dread "white plague" would soon be numbered among the pests that possess only a historical interest. But this hope was born of enthusiasm and trust in one man, who, though undoubtedly one of the most diligent and conscientious investigators that the world has ever seen, is still only a man, with a man's liability to err.

Recent reports have tended to check enthusiasm and crush hope. It was not long before it became plain that Koch's lymph could not be employed with safety in advanced cases of pulmonary tuberculosis; and the report of Virchow on the result found at the autopsies of twenty-eight patients who died during the treatment will perhaps make men feel that Koch's remedy will have to be restricted to so small a class of cases as practically to render it of limited value.

But Koch has given to the world the composition of his remedy. In his third communication on tuberculosis (*Deutsche Medicinische Wochenschrift*, January 15, 1891, *Medical News*,

January 17, 1891), Koch states that his "lymph" is an extract of a culture of the bacilli, dissolved in glycerine. (The text of his communication is given elsewhere in our pages.)

Much wonderment was caused by Koch's prolonged silence as to the composition of his fluid. If any other man were to announce that he had discovered a cure for consumption, which, however, he preferred to keep a secret (not for "reasons of State," but for "revenue only"), he would be sneered at by all the world as a selfish impostor; but Koch, the great bacteriologist, the great man of science, could transfer his responsibility to an Imperial Minister, and still retain the confidence of his admirers. This is, perhaps, the greatest tribute that could be paid to Koch's sincerity and conscientiousness.

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\* \* \*

Koch will have to look to his laurels.

In France, Grancher and Martin, of Paris, have filed a claim to priority in the treatment of tuberculosis by a method like Koch's: and in Philadelphia, Dr. Samuel G. Dixon thought that by subjecting tuberculous tissue containing an odd form of bacilli to the action of solvents, he would obtain an agent that would prevent the growth of tubercle-bacilli. He succeeded.

There is as much difference in the essential features of these three discoveries as there is betwixt tweedle-dum and tweedle-dee. Three investigators have thus independently made a discovery which, from the standpoint of the autopsies, seemed to be of no great practical value. Of twenty-one patients who died before January 1, 1891 (all being treated by Koch's method), sixteen were cases of phthisis. Although the "lymph" seems to be of benefit in cases of lupus, still it must be used with great caution and precision in consumption.

\*  
\* \* \*

A small vial of the precious lymph has arrived in New Orleans. It is being used at the Eye, Ear, Nose and Throat Hospital, under the supervision of Dr. A. W. de Roaldes, one of the surgeons of that institution. The lymph will be used judiciously. In our present issue, we have the good fortune to

present to our readers some preliminary notes of cases in which the lymph has already been tried. Our March issue will contain a more complete record of the observations.

New Orleans, we are happy to say, is the first city south of Baltimore that succeeded in obtaining a vial of the lymph. Much credit is due to the gentlemen connected with the Eye, Ear, Nose and Throat Hospital for the energy displayed in obtaining the lymph.

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Since writing the above, the daily press has informed us that President Harrison had received five vials of the "lymph." One of these he has given to Dr. Joseph Jones, of New Orleans. Dr. Jones has offered to share his treasure with any of the members of the visiting medical staff of the Charity Hospital provided that those who use the liquid will give him full reports of the cases and results of treatment. We feel that New Orleans will soon be able to add its quota of investigations to the great and increasing stock of information concerning the great question of tuberculosis.

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#### IMPURE AND ADULTERATED MILK IN LARGE CITIES.

Persons residing in the country, or in small towns away from the great centers of trade and competition, have no idea of the many frauds perpetrated by the vendors of the commonest articles of food consumed in large cities.

Not least among these is the adulteration of milk with dirty water, or some other substance designed to give it a creamy appearance and cause it to pass muster before the dreaded lactometer of the officers of the Board of Health.

It has now become the practice in all cities to keep dairymen under surveillance, so that at least the proportion of adulterants added shall be comparatively small. New York and Chicago and other cities have regular milk inspectors, whose sole duty is to procure and analyze samples of this article offered for sale, and to prosecute criminally all persons who sell other than the natural secretion of the cow.



Our own Board of Health has for the past five years made regular examinations of milk, and, by following up the offenders to the recorder's court, has succeeded in materially improving the standard of milk sold in the city of New Orleans. Some points of general interest were brought forward in a recent report of the chief sanitary inspector, and we will venture to quote a portion of it, as the conclusions to be drawn therefrom are obvious.\*

We can see from this what an easy thing it is for the public to be imposed upon and cheated by their milkmen, to whom they are paying the highest prices for the poorest quality of milk.

This is bad enough, but when we consider who are the persons consuming this fluid and what is the character of the adulterant consumed, the question comes home to us more directly as medical men. We have simply to refer to our mortuary records for May and June of any year and study over the large mortality among children from the bowel diseases, and then, when we think of the sour, stale, watered, or adulterated milk that many children are fed upon, we may, perhaps, be willing to discard the antiquated idea of "teething" being a cause of most of these complaints, and attribute a larger proportion of the deaths to improper nourishment.

The substances usually used for adulterating milk are starch, sodium chloride, borax, chalk, glycerine, and bicarbonate of soda.

When milk has been skimmed and watered its creamy appearance may be restored by the addition of condensed milk from cans, a common practice in New Orleans.

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\* "There are 502 dairies in New Orleans, stocked with 7254 cows, which give, according to the statements of their owners, 7053½ gallons of milk per day, though I am inclined to think the latter too low a figure.

"Supposing these figures to be correct, I estimate that 5 per cent. of the total amount of so called milk sold in this city *is water*, which has been added thereto by the dairyman or his employees. Not that I mean to say that every sample of milk sold is previously watered, for there are many dairymen who sell absolutely pure milk, but there is a larger number who daily add from 5 to 15 per cent. of water, and are never detected, except when intercepted by your sanitary officers. The amount of water that can be added without detection from customers is very great, and I once tested a sample of milk to which 75 per cent. of water had been added. This had been sold to a number of persons, but no complaint was lodged at our office by those who consumed this nourishing beverage. Figuring on the data here given, I estimate that at the rate of 40 cents a gallon the good people of this city are paying daily \$153.20 to dairymen for pure water, or rather for plain water—not pure, as much of it comes from wells in the low districts back of town, and frequently contains the poisons producing malaria and the diarrheal diseases of infants.

"Pursuing this subject a little further, we find that New Orleans pays \$55.918 per annum for a mixture of rain water and swamp water added to the milk supply by her considerate dairymen."

\* These data do not refer to dairies in other parishes which supply New Orleans consumers.

But what seems to us to be most injurious of all the substances added to milk by the New Orleans dairymen is simple water. This water is from cisterns or wells situated in the swamps back of town and is often teeming with the germs of malaria. Besides, there is the danger to milk from cows drinking ditch water, from which a number of apthous diseases are known to have arisen. Much more might be said upon the danger of impure milk to young children, particularly in reference to tyrotoxicon, a poison generated in stale and sour milk, but we shall have more to say on this subject at another time.

In conclusion, we heartily endorse the following assertions of Mr. J. Lewis Smith, in a paper on the "*Care and Feeding of Infants, with remarks on the great mortality of infants in the summer months, and mode of preventing it,*" published in the July, 1890, number of the *Dietetic Gazette*:

"In order to obtain milk of the best quality, it is necessary to procure it from a dairy remote from the city, where there is good pasturage, an abundant supply of water, and the health of the cows is promoted by outdoor life in open meadows. Stabled cows, in or near the city, fed with distillery food, hay, and in part by kitchen refuse, do not furnish good milk. Such cows are likely to have dirty udders, and their milk, chemically inferior to that of pastured cows, becomes in the open pails the receptacle of bacteria, which are abundant in stables of ordinary cleanliness. Milk, therefore, that is suitable for the nursery in the summer months is obtained at a distance from the city, where cows have the range of the fields, and lie at night in the open air upon the grass."

### THE RECESSION OF THE INFLUENZA.

During the past three months New Orleans has been again the victim of epidemic influenza.

It is difficult to attribute this visitation to any assignable cause beyond "atmospheric influences," though the weather has been exceptionally fine. The symptoms of "la grippe" are familiar to all of our readers, for during the past two years

it has prevailed through the entire south, as well as the north, and the past epidemic has developed no particularly new symptoms other than its effect upon the respiratory organs.

During November and the early part of December, there were few diagnoses on our mortuary records to show that this affection prevailed to any serious extent among us, but it soon became apparent, as the last month of the year began to wane, that there was unusual mortality in pulmonary diseases which could be entirely explained only by recognizing the influenza as the exciting cause.

Comparing the mortality record of some of the pulmonary diseases of December, 1889, with that of December, 1890, the difference will be at once apparent:

|                           | 1889 | 1890 |
|---------------------------|------|------|
| Pleurisy .....            | 2    | 0    |
| Hæmoptysis.....           | 6    | 3    |
| Bronchitis.....           | 29   | 55   |
| Pneumonia .....           | 41   | 140  |
| Phthisis pulmonalis ..... | 65   | 116  |
| Congestion of lungs.....  | 0    | 5    |
| Total .....               | 143  | 325  |

The pneumonia due to the influenza has not run its usual course, but begin generally as a bronchitis, which afterward develops into a broncho-pneumonia, often without the crepitant role of early pneumonic inflammation.

But during the past few weeks a decided change has occurred, and "la grippe" is passing away as quietly as it came, only a few cases remaining. It is estimated that very few persons in the city of New Orleans have escaped a touch from this unwelcome visitor, and it is known that many of those who did not escape are still reminded of it when annoyed by a troublesome cough or neuralgic pains, the common sequelæ of this disease.

## ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

### SURGERY.

#### PEROXIDE OF HYDROGEN AND OZONE—THEIR ANTISEPTIC PROPERTIES.

By Dr. PAUL GIBIER, Director of the Pasteur Institute of New York.

Since the discovery of Peroxide of Hydrogen by Thenard, in 1818, the therapeutical applications of this oxygenated



compound seem to have been neglected both by the medical and the surgical professions: and it is only in the last twenty years that a few bacteriologists have demonstrated the germicidal potency of this chemical.

Among the most elaborate reports on the use of this compound may be mentioned those of Paul Bert and Regnard, Baldy, Péan and Larrivé.

Dr. Miguel places Peroxide of Hydrogen at the head of a long list of antiseptics, and close to the silver salts.

Dr. Bouchut has demonstrated the antiseptic action of Peroxide of Hydrogen, when applied to diphtheritic exudations.

Prof. Nocart, of Alford, attenuates the virulence of the symptomatic microbe of carbuncle, before he destroys it, by using the same antiseptic.

Dr. E. R. Squibb,\* of Brooklyn, has also reported the satisfactory results which he obtained with Peroxide of Hydrogen in the treatment of infectious diseases.

Although the above mentioned scientists have demonstrated by their experiments that Peroxide of Hydrogen is one of the most powerful destroyers of pathogenic microbes, its use in therapeutics has not been as extensive as it deserves to be.

In my opinion the reason for its not being in universal use is the difficulty of procuring it free from hurtful impurities. Another objection is the unstableness of the compound, which gives off nascent oxygen when brought in contact with organic substances.†

Besides the foregoing objections the surgical instruments decompose the peroxide; hence, if an operation is to be performed, the surgeon uses some other antiseptic during the procedure, and is apt to continue the application of the same antiseptic in the subsequent dressings.

Nevertheless, the satisfactory results which I have obtained at the Pasteur Institute of New York with Peroxide of Hydrogen, in the treatment of wounds resulting from deep bites, and those which I have observed at the French clinic of New York, in the treatment of phagedenic chancres, varicose ulcers, parasitic diseases of the skin, and also in the treatment of other affections caused by germs, justify me in adding my statement as to the value of the drug.

But it is not from a clinical standpoint that I now direct attention to the antiseptic value of Peroxide of Hydrogen. What I now wish is merely to give a full report of the experiments which I have made on the effects of Peroxide of Hydrogen upon cultures of the following species of pathogenic

\* *Gailliard's Medical Journal*, March, 1889.

† The Peroxide of Hydrogen that I use is manufactured by Mr. Charles Marchand, of New York. This preparation is remarkable for its uniformity in strength, purity and stability.

microbes: *Bacillus anthracis*, *bacillus pyocyaneus*, the bacilli of typhoid fever, of Asiatic cholera, and of yellow fever, *stereptococcus pyogenes*, *micro-bacillus prodigiosus*, *bacillus megaterium*, and the *bacillus* of osteomyelitis.

The Peroxide of Hydrogen which I used was a 3.2 per cent. solution, yielding fifteen times its volume of oxygen: but this strength was reduced to about 1.5 per cent., corresponding to about eight volumes of oxygen, by adding the fresh culture containing the microbe upon which I was experimenting. I have also experimented upon old cultures loaded with a large number of the spores of the *bacillus anthracis*. In all cases my experiments were made with a few cubic centimeters of culture in sterilized test-tubes, in order to obtain accurate results.

The destructive action of Peroxide of Hydrogen, even diluted in the above proportions, is almost instantaneous. After a contact of a few minutes, I have tried to cultivate the microbes which were submitted to the peroxide, but unsuccessfully, owing to the fact that the germs had been completely destroyed.

My next experiments were made on the hydrophobic virus in the following manner:

I mixed with sterilized water a small quantity of the medulla taken from a rabbit that had died of hydrophobia, and to this mixture added a small quantity of Peroxide of Hydrogen. Abundant effervescence took place, and, as soon as it ceased, having previously trephined a rabbit, I injected a large dose of the mixture under the *dura mater*. Slight effervescence immediately took place and lasted a few moments, but the animal was not more disturbed than when an injection of the ordinary virus is given. This rabbit is still alive, two months after the inoculation.

A second rabbit was inoculated with the same hydrophobic virus which had not been submitted to the action of the peroxide, and this animal died at the expiration of the eleventh day with the symptoms of hydrophobia.

I am now experimenting in the same manner upon the *bacillus tuberculosis*, and if I am not deceived in my expectation, I will be able to impart to the profession some interesting results.

It is worthy of notice that water charged, under pressure, with fifteen times its volume of pure oxygen has not the antiseptic properties of Peroxide of Hydrogen. This is due to the fact that when the peroxide is decomposed nascent oxygen separates in that most active and potent of its conditions next to the condition, or allotropic form, known as "Ozone." Therefore it is not illogical to conclude that ozone is the active element of Peroxide of Hydrogen.

Although Peroxide of Hydrogen decomposes rapidly in the presence of organic substances, I have observed that its decomposition is checked to some extent by the addition of a sufficient quantity of glycerine; such a mixture, however, can not be kept for a long time, owing to the slow but constant formation of secondary products, having irritating properties.

Before concluding I wish to call attention to a new oxygenated compound, or rather ozonized compound, which has been recently discovered and called "Glycozone" by Mr. Marchand.

This Glycozone results from the reaction which takes place when glycerine is exposed to the action of ozone under pressure—one volume of glycerine with fifteen volumes of ozone produces Glycozone.

By submitting the bacillus anthracis, pyocyaneus, prodigiosus, and megaterium to the action of Glycozone, they were almost immediately destroyed.

I have observed that the action of Glycozone upon the typhoid fever bacillus, and some other germs, is much slower than the influence of Peroxide of Hydrogen.

In the dressing of wounds, ulcers, etc., the antiseptic influence of Glycozone is rather slow if compared with that of Peroxide of Hydrogen, with which it may, however, be mixed at the time of using.

It has been demonstrated in Pasteur's laboratory that glycerine has no appreciable antiseptic influence upon the virus of hydrophobia; therefore I mixed the virus of hydrophobia with glycerine, and, at the expiration of several weeks, all the animals which I inoculated with this mixture died with the symptoms of hydrophobia.

On the contrary, when glycerine has been combined with ozone to form Glycozone, the compound destroys the hydrophobic virus almost instantaneously.

Two months ago, a rabbit was inoculated with the hydrophobic virus which had been submitted to the action of this new compound, and the animal is still alive.

I believe that the practitioner will meet with very satisfactory results with the use of Peroxide of Hydrogen for the following reasons:

1. This chemical seems to have no injurious effect upon animal cells.
2. It has a very energetic destructive action upon vegetable cells—microbes.
3. It has no toxic properties; five cubic centimeters injected beneath the skin of a guinea pig do not produce any serious result, and it is also harmless when given by the mouth.



As an immediate conclusion resulting from my experiments, my opinion is, that Peroxide of Hydrogen should be used in the treatment of diseases caused by germs, if the microbial element is directly accessible; and it is particularly useful in the treatment of infectious diseases of the throat and mouth.—*Medical News, October 25, 1890.*

## MEDICINE.

### VIRCHOW ON THE INJURIOUS EFFECTS OF KOCH'S METHODS.

At the Berlin Medical Society on January 7, Prof. Virchow exhibited specimens from twenty-one patients treated by Koch's method who died before January 1. Since then six or seven more necropsies had been made by him and specimens from these were also shown. Of the former series sixteen were cases of phthisis.

Prof. Virchow illustrated the irritating effects of the fluid by the specimen of a brain removed from a child with tuberculous arachnitis, who died after four injections of the lymph, amounting in all to two milligrams. There was intense hyperæmia of the brain and pia mater such as Prof. Virchow had never before seen. The vessels of the pia were extremely engorged and the brain substance internally was of a dusky-red tint. The speaker could not see any signs of retrogressive metamorphosis of the tubercles. Acute hyperæmia and swelling were also seen in the internal organs of other cases. The walls of old cavities in the lungs showed unusual redness of the granulations and recent hemorrhages. In one case hæmoptysis from an old cavity was the immediate cause of death.

Virchow says there can be no doubt that in internal organs acute inflammation and active proliferation are set up by injection of the fluid. These conditions are seen particularly in the edges of tuberculous ulcers and in neighboring lymphatic glands, especially the bronchial and mesenteric glands. These glands swell to quite an unusual extent and rapid proliferation of the cells in their interior takes place. The colorless elements of the blood are increased and a condition of leucocytosis is established. In the larynx, even when the surfaces of the ulcers become clean, swelling of the adjoining parts may be dangerously great. He showed a recent specimen in which erysipelatus-like œdema of the glottis and a retro-pharyngeal phlegmon had been produced. The changes in the lungs consisted in caseous hepatization, of which an extreme example was shown.

This condition existed in five out of the sixteen cases of phthisis, associated with a special form of pneumonia, resembling the catarrhal type, but differing therefrom in the character of the secretion. The lungs in some places presented foci of softening, and even cavities, the result of acute inflammation caused by the injections of the lymph.

*The most important effect observed, however, was an eruption of fresh crops of tubercles after the injections.* This occurs especially in the pleura, pericardium and peritoneum, and Virchow says that in the case of these serous membranes the statement that the substance of the tubercle is destroyed by the remedy is not confirmed by his examinations; he adds that if the effect of the remedy is to cause breaking down, the result would be to release the bacilli and give rise to new foci of tuberculous disease in other parts of the body by infection with the products of disintegration. Virchow, therefore, urges the greatest caution in the use of the remedy. While admitting that in many cases the lymph does produce the effects claimed for it, he points out that this result is not constant, and he cites cases in which large masses of tubercle were entirely unaffected by injections. He also showed specimens in which perforation of the intestines had been caused by the treatment, and one case of tuberculosis of the larynx in which fresh and extremely intense eruptions of tubercles had taken place throughout the whole extent of the larynx and trachea.

*January 14.* Before the Berlin Medical Association to-day Prof. Virchow resumed his lecture on the subject of cases which have resulted fatally after the inoculations of the Koch remedy. He said that he was not prejudiced against the remedy; he simply wished to give warning regarding its too general application. In the discussion which followed, Profs. Fränkel and Baginsky spoke in support of Prof. Virchow's contention that tubercular disease was sometimes transferred to sound organs by inoculation. Numerous patients in Vienna, after reading the views expressed by Prof. Virchow, declined to submit to further treatment by the Koch method.—*Medical News.*

#### ABSTRACT OF A THIRD COMMUNICATION ON A REMEDY FOR TUBERCULOSIS.\*

By PROF. ROBERT KOCH.

As long as the only point of importance was to judge of the correctness of my statement it was not essential to know what the remedy contained and what its origin was. On the

\* Deutsche Medicinische Wochenschrift, January 15, 1891.

contrary, it was clear that subsequent experiments would be all the more unprejudiced if nothing was known of the remedy itself. I think the right moment has come to make the statements which follow.

If guinea pigs be inoculated with a pure cultivation of tubercle bacilli the wound closes with a sticky exudate. After ten to fourteen days a hard nodule presents itself, which, soon breaking, forms an ulcerating sore, which continues until the animal dies.

Quite a different condition of things occurs when a guinea pig already suffering from tuberculosis is inoculated. An animal successfully inoculated from four to six weeks before is best adapted to this purpose. In such an animal the small indentation assumes the same sticky covering at the beginning, but no nodule forms. On the contrary, on the day following or the second day after the inoculation, the place where the lymph was injected shows a peculiar change taking place at the point of inoculation.

At the point of inoculation and for one centimeter around tissues become hard and dark. During the next few days it becomes clear that the epidermis thus changed is necrotic; finally, it is thrown off, and a flat, ulcerated surface remains, which generally heals quickly and completely without carrying infection to the neighboring lymphatic glands. Thus the inoculated tubercle bacilli act quite differently on the skin of a healthy guinea pig than on that of a tuberculous one, but this remarkable action does not belong exclusively to living tubercle bacilli, but also in the same degree to dead ones, whether killed by low temperatures of long duration, which I at first tried, or by boiling heat, or by certain chemicals. Pure cultivations of tubercle bacilli thus killed after they have been ground down and suspended in water, can be injected under the skin of healthy guinea pigs in large quantities without producing anything but local suppuration.

Tuberculous guinea pigs can be killed by injections of very small quantities—a small dose producing widespread necrosis of the skin. If still more dilute the animals remain alive, and if the injections be continued at intervals of one or two days, a noticeable improvement in their condition soon sets in. The ulcer at the point of inoculation becomes swollen and finally cicatrizes. This is never the case without such treatment. The swollen lymphatic glands become smaller and the condition, as regards nutrition, improves. Finally, the progress of the disease is arrested, if it is not already so far advanced that the animal dies of debility. The important thing to be done is to carry out the process which takes place



within the body, outside of it also, and, if possible, to extract and isolate the curative substance from the tubercle bacilli. This problem required much work and time before I at last succeeded by the help of a 40 to 50 per cent. solution of glycerine in extracting the active principle from the tubercle bacilli.

My further experiments on animals, and finally on human beings, were made with liquid thus obtained, and in this way also the liquid which I let other physicians have in order to repeat the experiments, was obtained. The remedy with which the new treatment of tuberculosis is carried out is, therefore, a glycerine extract of pure cultivation of tubercle bacilli. The constitution of the active principle can as yet be only a matter of conjecture.

It seems to me to be a derivative of albuminous bodies, and to be in close relation to them, but it does not belong to the group of so-called tox-albumins, as it can withstand high temperatures, and in the dialyzer passes quickly and easily through the membrane.

The quantity of active principle present in the extract is in all probability very small. I estimate it at a fraction of 1 per cent.; thus if my assumption be correct, we have to deal with a substance, the action of which on the tuberculous organism far surpasses that of the strongest drugs known.

[The paper concludes with speculations as to the mode of action of remedy in affected tissues.—ED.—*Medical News.*]

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POSSIBILITY OF CHECKING THE TUBERCULAR PROCESS IN MAN  
BY THE AGENCY OF A METABOLIC PRODUCT OF  
THE TUBERCLE BACILLUS.

By SAMUEL G. DIXON, M. D.

In the *Medical News* of October 19, 1898, I called attention to a morphological change of the tubercle bacillus, which was different from any that I had previously seen. This change of form suggested to my mind a possible evolution of function, and I realized that it might mean either a greater or less degree of virulence. As a less degree of virulence would be desirable in order to increase the power of animal resistance to pathogenic organisms, I cultivated the bacilli in a number of tubes to the stage at which few or no ordinary rod-formed bacilli could be found in the cultures. When they had arrived

at this state of life, I imbedded a mass of the bacilli and debris under the skin of a guinea pig. The inoculation apparently set up a disturbance in the animal economy. There was a short febrile stage; the lymphatic glands became swollen and the guinea pig seemed to be quite sick. This condition, however, soon passed away and the animal apparently recovered. Immediately after this injection the animal seemed to resist the effects of virulent tubercle bacilli.

In working out the two hypotheses published on October 19, 1889, I became convinced that by treating a mass of tuberculous tissue containing the odd forms of bacilli with some powerful solvent, I might dissolve out a principle that when injected into the animal economy would change the chemical condition of the tissues and thereby prevent the growth of the tubercle bacilli that inhabited the tissues.

To accomplish this, I submitted the tubes containing these actual tuberculous bacillary growths to the action of ether, and also to a saturated solution of sodium chloride. The respective mixtures were then passed through a Pasteur filter without pressure. This active principle, when subcutaneously injected in tuberculous animals, caused a febrile reaction. The tissue in the immediate neighborhood of the tubercles becomes hyperæmic, and the symptoms manifested resemble those produced by the introduction of a portion of the original mass. They also resemble the symptoms said to be produced in tuberculous animals by the introduction of the Koch remedy into the circulation, as well as those produced by the liquid made by Dr. Craft, of Cleveland, Ohio.—*Medical News*.

#### A CASE OF FATAL BURNING FROM SPONTANEOUS COMBUSTION, CAUSED FROM LINSEED OIL AND COTTON OR WASTE.

By T. B. CAMDEN, Parkersburg.

I was called January 28, 1890, to see C. L., who was employed at the Camden Consolidated Oil Company, at Parkersburg. He had been painting with boiled linseed oil and mineral paint, and his clothes, especially the sleeves of his outer shirt, which was of light woollen, and a knit undershirt, were saturated with the oil and paint. After finishing his work he went to a bucket of benzine and commenced washing the paint off his clothes, when there was an explosion, and he found himself enveloped in flames. A dark, rough blanket was near at hand, and he was wrapped in it, and the fire was extinguished, but not before he was terribly burned on both arms,

hands, sides and back. I found him naked down to the waist with the rough, dark blanket thrown around him, and his companions were pouring linseed oil over him from a large bucket. I dressed him as well as I could at the factory with raw cotton and cloths and still kept up the oil dressing.

As soon as possible we removed him in a carriage to his home in town; the same dark blanket was wrapped around him, still saturated with the linseed oil. When we put him to bed, which was of feathers, I raised the sheet and placed the same blanket that had been around him on the feather bed to protect it from the oil, which we were still using freely.

We got him home and in bed about 4 P. M.; next day at about 10 o'clock I was sent for hurriedly and found the household, patient and friends in the greatest consternation. The bed and blankets and sheets had taken fire and the patient was again burned slightly, and was terribly frightened, and as he expressed it, "Am I bound to burn up yet?" The bed and blanket, the attendants informed me, were in a bright glow of coal, when the heat and odor caused them to investigate the fire; holes were burned in the bed, blankets and sheets.

When I was called to see him at the factory, I inquired about the cause of the fire, and was informed that they could not account for it, as it was the rule at the oil works that no fire should be used, as the ignition of the oil and gas would endanger the life of the employ  s and the factory. This rule has always been strictly enforced, and the young man always declared he could not account for the fire. The cause of his burning and the fire was a mystery. The second fire in his bed, fifteen hours after he was put in it, was a greater one, and I began to investigate. I asked the chemist, Mr. Harris, at the oil factory, to use the same oil and test its oxidation with cotton waste. The first test was by saturating waste with linseed oil and keeping it at a temperature of 140 deg.; in three hours it began to smoke and in a draught ignited. Second test, by rubbing waste containing some paint and the linseed oil on a wooden block for two minutes, then put in oil, both at a temperature of 95 deg. (not quite the heat of the human body); it took fire in less than one hour. Linseed oil alone was used on the waste with the same results. Fourth, linseed oil and waste were kept at 95 deg. three and one-half hours, were taken out and rubbed and soon began to smoke, and in a draught ignited. These experiments were intended to place the oil and waste as near as possible under the same conditions that they were in the bed of the patient, and at about the same temperature of his body heat. All the experiments brought about



chemical oxidation and combustion, and we have every reason to believe that the burning and subsequent fire in his bed were from similar causes. After the fire in his bed, I changed the dressing to linseed oil and lime water, and the chemist tested the combustive power of this mixture on waste. It would not ignite. He tried petroleum oil and benzine on waste; it did not ignite.

Now to account for the first fire. It is supposed that the young man's clothes had been saturated with linseed oil and mineral paint for several hours or days, and from his body heat and temperature of the room, all the conditions were fulfilled to bring about oxidation and combustion, as were the tests made by the chemist. It is reasonable to suppose that by the rubbing at the time he was washing his clothes with benzine they ignited at some point, and gas from the benzine suddenly igniting caused the flash of gas that enveloped him. His clothes being already in a condition to rapidly ignite by the heat did so and burnt him rapidly and deeply, not like a flesh burn, but, as it afterward proved to be, a very deep one. The benzine in the bucket in which he was washing did not ignite, as it remained in the bucket. If it had taken fire it could not have been extinguished. The conclusion is, that vegetable oils, linseed, cotton, and perhaps animal oils, rapidly oxidize when spread over fibrous substances, such as cotton, wool, etc., and readily combust when a certain amount of heat is present, and mineral oils do not oxidize readily.

To end the story of the unfortunate young man, he lingered and suffered tortures for about a month, and died, a victim to the mysterious fire. May not many of the unaccountable fires that we read of be from the same cause, the oxidation of vegetable or animal oils by being placed under favorable conditions on cotton or woollen garments, or perhaps on shavings of wood, with heat applied by chimneys or pipes or warm closets? Painters almost always leave some garment, overalls, apron or something saturated with oil and paint where they last work, wrapped and often placed in a garret or in some closet, or in some out of the way place, where the heat of a chimney or steam pipe brings it up to the required temperature for combustion. And in this way many of the supposed incendiary or unaccountable fires no doubt originate. The terrible fire and its sad results of Secretary Endicott's home in Washington might have been from this cause. Only a week ago I read of a fire in Allegheny caused by spontaneous combustion, totally burning the Eagle Varnish Works and partly burning the Fralich Grease Works and the Hall Steam Pump Company. The Varnish Company's loss is about \$10,000 and the Grease and

Pump Company's loss together about \$10,000. If, then, spontaneous combustion does occur by the rapid oxidation of oils, under favorable circumstances, as was proven by experiments by the chemist at the oil works, it becomes of the greatest importance to factories, dwellings, insurance companies, etc., to know that fact and under what circumstances they occur, so they may guard against heavy loss of property, and, as in this instance, the loss of life,—*Proceedings of the Medical Society of West Virginia.*

## LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY.

By A. W. DE ROALDES, M. D.

### EDEMA OF THE LARYNX AFTER THE ADMINISTRATION OF POTASSIUM IODIDE.

[DR. ALBERT ROSENBERG, in *Deutsch Mediz. Wochenschr.*]

Just as frequently as we have occasion to observe and hear of the occurrence of the ordinary manifestations of iodine intoxication, such as conjunctivitis with œdema of the eyelids, coryza, headache, acne, etc., so little do we see in our medical literature about the most important of them all, œdema of the larynx.

It is scarcely necessary to do more than repudiate the misnomer œdema of the glottis, since it is self-evident that a glottis, an aperture, can not become œdematous. Still the term occurs so frequently, even in purely laryngological literature, that it is well to make public opposition to it.

The reported cases of iodism in which dyspnœa in consequence of laryngeal œdema is noted, are very few. The text books on laryngology do not contain any special reference to it. Schrötter, in his detailed discourse on the subject of laryngeal œdema fails to mention this etiological factor, as do Mackenzie and others. Gottstein, Charazac, Ehrlich, Binz and others refer to it in their respective publications.

The first case of the kind was described by Fenwick, in 1875, who observed such a high degree of laryngeal œdema, that he at once had the patient tracheotomized, and thus saved his life, though he was pulseless and had ceased breathing, so that artificial respiration had to be performed. Fournier, in speaking of the treatment of syphilis, mentions the ill effects sometimes produced by the iodides, and recounts four cases of œdema laryngis which necessitated tracheotomy, two of which died in spite of the operation.

In the present year Gower published four cases of

Forster's, one of which was likewise observed by Gottstein. My own case came under my observation about three months ago. It was doubtless a case of acute œdema of the larynx, brought about by the exhibition of potassium iodide. It differs from other cases solely in the peculiar seat of the trouble. Subjoined is a report of the case.

A. R., female. 21 years of age, book-keeper by occupation, had been on a  $2\frac{1}{2}$  per cent. solution of iodide of potash for hoarseness of one-half year's existence. Having taken two tablespoonfuls, one at noon, the other at night, she awoke during the night with a sensation of anxiety which soon culminated in dyspnœa of high degree, so that she was compelled to remain sitting upright in bed for the remainder of the night.

The next morning she was seized with a violent headache and fever. The dyspnœa improved somewhat in the course of the forenoon, but was still so great that she came to the Polyclinic for treatment, having in the meantime discontinued the use of the solution, to which she attributed the untoward symptoms.

Upon examining we found the pulse very rapid; respiration slow and difficult, with an inspiratory stridor, expiration being accomplished easily and almost noiselessly; the nasal mucous membrane swollen and succulent; the posterior wall of the pharynx appeared thickened, the mucous membrane infiltrated; the naso-pharynx presented nothing special or abnormal; the vocal cords were congested; the subglottidean mucous membrane very deep red in color, and the portion covering the posterior laryngeal wall bulging forward with œdema the full length of the larynx.

Absolute rest and ice locally soon reduced the swelling, so that the next day considerable improvement was noted; the swelling had gone down one-half; respiration free and easy. Recovery unimpeded from this out, with complete recovery within five days.

In analyzing the case we can only conclude from the train of symptoms and the course taken, that we must necessarily have been dealing with subglottidean laryngeal œdema caused directly by potassium iodide. A chronic laryngitis in a young lady who never before suffered any disease of the respiratory tract; patient is seized with sudden dyspnœa, which, as the laryngoscope reveals, has its origin in œdema of the mucous membrane of the posterior larynx; no ulcer, no perichondritis, no paralysis or other pathological condition of the larynx, no disease of heart or kidneys; after discontinuation of the iodide, gradual subsidence of all symptoms. All this is sufficiently corroborative of the diagnosis.



The sudden onset of the dyspnœa after such comparatively small doses of the causative agent is easily explained. In all instances of iodism, the toxic symptoms set in very soon after the iodide has been taken, no difference in what form they appear, and whether it be due to peculiar susceptibility or an overdose. It is a well known fact that in a few minutes after introduction of iodides into the stomach, iodine can be found in both the saliva and the urine.

The tendency of iodine to produce toxic symptoms when exhibited in small doses is remarkable, and has its analogy in the so-called intolerance-phenomenon of arsenic. Toleration of the agent soon becomes established. According to Binz, the potassium combines with other elements in the body, and the iodine, being liberated, exists free. Different authors entertain different views concerning the manner of liberation of iodine in the system. No matter how it is accomplished, the fact remains that the manifestations of iodism are intimately associated with the presence of glands and lymphatics, *i. e.*, where glands exist most numerously, there the symptoms of iodism will first prevail. This will help us to understand more clearly how it is that they come with such alarming rapidity. The momentous question is how to avoid this iodism. The consensus of all observers is that by administering very small doses first, which are gradually increased, the trouble may be entirely anticipated.—*Pittsburg Medical Review.*

#### OTALGIA AND ITS TREATMENT.

Dr. Gompers (*Centralblatt f. gesam. Therapie*) makes the following classification of ear pain with reference to its etiology, viz: The pain connected with otitis externa; the pain associated with otitis media; otalgia nervosa. In either case it is intense, even violent. Otitis externa occurs either as a circumscribed furuncle, or as a diffuse inflammation of the auditory canal. In the first instance the pain subsides most rapidly if the furuncle is freely split open with a tenotome. If, however, the patient refuses to submit to this little operation, a solution of five parts of lead acetate and one part of alum in one hundred parts of water, applied on a small pledget of cotton to the furuncle, will lessen the pain materially. The bougies of Gruber, the formula of which is appended, may be substituted for the solution:

℞. Extr. Opii Aq..... 0.1 gm.  
 Gelatin Alb..... 5. gm.  
 ℥. Make into ten aural bougies.

These are introduced into the auditory canal, where they readily dissolve.

The diffuse inflammatory condition is treated best with a 5 or 10 per cent. solution of cocaine muriate, applied warm.

Otitis media, which as a rule is associated with a myringitis, is characterized by the most violent pain. If the stage of suppuration has not yet been reached, the whole process may be anticipated by instillation of cocaine solution into the auditory canal, which is repeated every hour or two. Should this fail, carbo-glycerite of 20 per cent. strength must be employed if we would obtain good results: if suppuration have already set in, and bulging of the membrana tympani becomes visible, paracentesis of the membrane will afford prompt relief. Antiseptic washes complete the treatment. In cases of chronic otitis this cleansing should be preceded by the application of fifteen or twenty drops of a 5 per cent. papain solution, which is permitted to remain for one hour, during which time the scales of hard, dry pus will soften and escape with the ear wash.

In contradistinction to otitis externa and media, otalgia nervosa is not dependent upon any aural inflammatory condition. It may be idiopathic, in which case there is often no cause apparent, or it may be sympathetic, the pain being reflected from some local condition of adjacent parts, *e. g.*, carious teeth, dental abscess, swelling or inflammation of the cervical glands, the throat, etc., and subsides when the affected parts return to health.—*Pittsburg Medical Review*.

#### TREATMENT OF RELAXATION OF THE DRUM MEMBRANE BY COLLODION.

[Society of Medical Sciences of Lyons.]

Mr. Lannois exhibits a patient who is affected with relaxation of the tympanic membrane. This relaxation, as is well known, is due to various causes, and may be partial, or, on the other hand, involve the whole drum. In this patient's case the relaxation is general, but more marked in the anterior than in the posterior segment (left ear). The eustachian tube is very free, and insufflation of air through the catheter raises the hearing distance to the watch from three centimeters to forty and forty-five centimeters: unfortunately, at the end of a few hours at most, the hearing distance is again reduced to the original three centimeters. The patient has been under the care of many otologists, and always with the same results.

Various methods have been advocated to remedy this relaxation, which prevents the membrane from resisting the ex-

ternal atmospheric pressure, and is followed by deafness, tinnitus and vertigo.

Instant applications, repeated perforations with the myringotome or with the galvano-cautery, have been proposed.

Keown advocated in 1879 spreading over the drum a coating of collodion, and more recently Keller has published on this subject a memoir which Mr. Lannois has been unable as yet to procure. After having catheterized the patient, Lannois allows the collodion to flow down into the fundus of the external canal and removes the surplus with absorbent cotton. To make it surer, catheterism is practised a second time. In the present case, this proceeding induced a remarkable change, the hearing distance to the watch having remained at forty centimeters during three months and a half. The collodion became then a little detached at the edge; it required but a few drops of ether to allow the withdrawal of a glove finger-shaped membrane, at the end of which every detail of the drum could be recognized. The collodion was again used the next day with the same favorable result, and it is to be noted that after the first application the hearing distance had remained at fifteen centimeters, a proof of a certain degree of permanent improvement.

Mr. Lannois has used the same method in two other cases, and has also obtained a very good result in one of them, a young girl of 13 years, in whom audition improved permanently from twelve to thirty-five centimeters (to the watch).—*Lyon Médical, December, 1890, No. 49.*

#### BACTERIOLOGICAL RESEARCHES ON PSEUDO-DIPHTHERITIC ANGINA OF SCARLET FEVER.

MM. Bourges and Wurtz have arrived at most interesting and practical conclusions on the above subject, as the result of investigations carried on by them in Prof. Straus' laboratory. The cases they studied at the Trousseau hospital were children with scarlet fever, in whom the early angina was so serious as to cause their removal to the diphtheritic ward. Bacteriological examinations of the false membranes revealed in every case (nine) the presence of a pyogenic streptococcus, either pure or associated with other microbes of suppuration. In none of these cases did the authors succeed in isolating the specific bacillus of diphtheria, the bacillus of Klebs-Loeffler: on the other hand, in two cases of pseudo-membranous angina of scarlet fever this bacillus did exist.

One of the children affected with angina with streptococ-



cus, had a secondary attack of cramps in the diphtheria ward, and died of it. MM. Bourges and Wurtz present the following conclusions: The early angina of scarlet fever is not in the great majority of cases of late diphtheritic origin, however serious the symptoms may be.

It therefore follows that children, attacked with it should not be sent to the diphtheria ward, for, by so doing, they will be exposed to a disease which they have not.—*Progrès Médical*, May 10, 1890.

## DERMATOLOGY AND HYGIENE.

### ARISTOL AS A SUBSTITUTE FOR IODOFORM.

Aristol is the biniodide of dithymol or, in other words, a combination of iodine and thymol. It is obtained by mixing iodide of potassium with a solution of thymol in caustic soda.

Reports upon the use of aristol are numerous and conflicting, and, while it does not always produce the remarkable results recorded by earlier observers, it bids fair to pass into general use in surgery and dermatology as a succedaneum of iodoform. Indeed, aristol has certain properties which give it a decided advantage over iodoform, and its weaker whilom substitute, iodo. Aristol occurs as a yellowish powder somewhat resinous to the touch, and is almost odorless, the smell being faintly suggestive of iodine. It is a finer powder than iodoform, and when sprinkled upon raw surfaces adheres closely to them.

Less irritating than iodoform, it stimulates without producing itching or erythema. It is also an alterative, but its anæsthetic properties are weaker than those of iodoform. Aristol, when absorbed, is less toxic than iodoform. Spread upon an open wound or indolent ulcer, it stimulates and disinfects, and can be used for a longer time than iodoform, as the granulations forming under it are less exuberant.

Aristol has been used for a variety of skin and venereal diseases, giving favorable results in some and negative results in others.

In psoriasis it acts well, but is inferior to chrysarobin; in subacute and chronic forms of eczema, made into a salve with vaseline or lard in the proportion half a drachm, or a drachm, to the ounce, it has been found to bring about the desired resolution. Much has been said of the use of aristol in tertiary syphilis, the ulcers of which are dusted with the powder. We have used it in these cases and found it superior to iodoform, though it is reasonable to suppose that the ulcers would have

healed neatly under other simple dusting powders as long as the iodide of potassium was administered internally at the same time.

Schmitt (*Revue Med. de l'Est*) has used aristol in the treatment of chancroids, gonorrhœa, vaginitis and a variety of syphilitic lesions, and found its results entirely negative; while, on the contrary, it has given satisfaction in an erosion of the cervix due to a gonorrhœal metritis, in a strumous adenitis with ulceration, in a case of decubital ulcer, in two cases of psoriasis, and seven cases of varicose ulcer.

Brocq (*Bull. et Mém. de la Soc. Médic. des Hôpitaux*) reports the rapid cicatrization of a superficial epitheliomatous ulcer of the face of a man 50 years old. The ulcer involved the left nostril and cheek, including the lower eyelid of the same side, and was of ten years' duration. The cicatrization under the local application of aristol was nearly complete in twenty days.

We have used aristol in three cases of this affection (rodent ulcer), and our experience bears out the statement of Brocq that it is a cicatrizing agent. Two of our cases, which we had operated upon with the curette, healed kindly under aristol powder, and, after five months, show no signs of a return. To the third case, which had been curetted eighteen months ago and showed a tendency to recur, a salve of aristol (5 ii-3 i) was applied for two weeks, and the smooth, waxy surface of the disease entirely disappeared.

The antiseptic properties make it useful, along with a host of other remedies, as a topical agent in the vegetable parasitic diseases of the skin, such as tinea versicolor, ringworm and favus, where it should be used in the form of lotion or ointment. It has given no permanent results in lupus vulgaris.

Aristol should be mixed with ether, chloroform, the fatty oils, vaseline or lanolin, in all of which it is soluble. It is insoluble in water and glycerine, and should be protected from heat and light, which cause it to decompose. A neat way to apply aristol to the skin is by mixing it with flexible collodion. In this way it may be painted upon enlarged glands in the neck or groin, and the patches made by the parasitic diseases.

Given internally, aristol can not be relied upon as a substitute for iodide of potassium.

#### ANTISEPTIC TREATMENT OF FURUNCLES.

Dr. Vogt (*Revue Sanitaire de la Province*) declares that successive crops of boils in the same subject are due to the reinoculation of the pathogenic microbe from the clothes.

Ordinary washing of the garments does not disinfect them, and they are capable of communicating the disease until they have been passed through a furnace with superheated steam. A case is cited of a person who reacquired furunculosis from an undershirt which had been laid away in the wardrobe at the end of the preceding cold season. Dr. Vogt believes that the views held by many of the profession that furunculosis reappears at certain seasons of the year are to be explained in this way.

His cases have not been numerous, but his method, when practised, has always prevented a recurrence of the disease.

#### SALICYLIC ACID FOR CHANCROIDS.

Dr. Blanc claims that in the treatment of chancroids he has attained better results with salicylic acid than with iodoform, iodol, aristol, calomel, or any of the antiseptic powders usually applied in this affection. His method is as follows: The sores are first dried with absorbent cotton and then cauterized with pure nitric acid. This produces a superficial slough and destroys the specific nature of the ulcer. There is another advantage in the use of the caustic which should never be lost sight of, namely, that it may also destroy the poison of syphilis if the sore be a recent one; for the syphilitic virus frequently accompanies the chancroidal, and, while there is yet no indication of absorption, there is a possibility that the poison may not have been taken into the system. Salicylic acid will cure many chancroids without the previous use of nitric acid, and its application in this way has been vaunted by Hebra and many others, but, for the reasons given above, it is better to use the caustic. The sore is then dusted with pure salicylic acid, care being taken to put the powder only on the diseased surface. In some cases there is a burning sensation lasting a fraction of a minute, and then there is no more discomfort from the use of the salicylic acid. After four days this is discontinued, and the sore will then heal under any mild powder or salve.

Salicylic acid, besides being a reliable antiseptic, has a direct action on the epithelial cells of the mucous membrane, destroying them and leaving sound tissue beneath. While the powder is upon the sore its edges will take on a whitish or blanched appearance, which rapidly disappears when the drug is discontinued.

Dr. Blanc has tried resorcin as a substitute for salicylic acid, but its action, though similar to that of the acid, was much too irritating and destructive.



## THE TREATMENT OF FURUNCLES.

Dr. Veil (*Monatshefte f. prakt. Dermatolog.*) states that the object of treatment in furunculosis should be (1) to destroy with parasitocides the micrococci which have penetrated the skin; (2) to hasten the detachment of the necrotic portions; (3) prevent the formation of new furuncles by infection through pyogenic cocci escaping from the suppurating furuncles; (4) to prevent as far as possible the invasion of the body by pyogenic organisms. The first indication can not readily be accomplished unless the antiseptic is injected directly into the purulent centers. The second is best fulfilled by the old method of poulticing. At night we may apply a paste consisting of zinc oxide, vaseline and 4 per cent. of boracic acid. It is injurious to press out the contents at an early period. The third indication is fulfilled by rubbing in the paste three times daily, together with sublimate baths. The patient should be put on a nourishing diet; the administration of arsenic, however, is of no value.—*Wiener Medizinische Wochenschrift*, No. 45, 1890.

## BOOK REVIEWS AND NOTICES.

*The Patients' Record for the Use of Physicians and Nurses.*  
Compiled by Agnes S. Brennan. New York: G. P. Putnam's Sons, 1890. [New Orleans: Hawkins & Co., 194 Canal street. \$2.]

This book contains ninety-nine double pages for recording nursing notes in as many cases. The pages are ruled in columns, in which observations are recorded, date, time, pulse, temperature, respiration, medicine, nourishment, stimulants, remarks, urine. On each page, there is room for thirty observations in every case, and a small blank leaflet is pasted between the leaves for the doctor's orders. At the end of the book there is a number of clinical charts, which may be torn off at the end of the case and preserved with other records of cases.

This record was evidently compiled by some one familiar with the needs of physicians and nurses. The use of such a record in protracted cases will prevent the occurrence of mistakes in the administration of food and medicines, and in keeping an exact and reliable record of the course of a disease, upon which much of the treatment will depend. A. McS.

## MORTUARY REPORT OF NEW ORLEANS.

FOR DECEMBER, 1890.

| CAUSE.                            | White | Colored | Male | Female | Adults | Children | Total |
|-----------------------------------|-------|---------|------|--------|--------|----------|-------|
| Fever, Yellow .....               |       |         |      |        |        |          |       |
| “ Malarial (unclassified).....    | 5     | 3       | 6    | 2      | 8      |          | 8     |
| “ Intermittent .....              |       |         |      |        |        |          |       |
| “ Remittent .....                 | 2     | 2       | 2    | 2      | 4      |          | 4     |
| “ Congestive.....                 | 5     | 2       | 5    | 2      | 5      | 2        | 7     |
| “ Typho-Malarial.....             |       | 1       | 1    |        | 1      |          | 1     |
| “ Typhoid or Enteric.....         | 3     | 2       | 2    | 3      | 5      |          | 5     |
| “ Puerperal .....                 | 1     |         |      | 1      | 1      |          | 1     |
| Scarlatina .....                  | 1     |         | 1    |        |        | 1        | 1     |
| Small-pox .....                   |       |         |      |        |        |          |       |
| Measles .....                     |       |         |      |        |        |          |       |
| Diphtheria .....                  | 10    | 4       | 7    | 7      |        | 14       | 14    |
| Whooping Cough .....              | 2     | 1       |      | 3      |        | 3        | 3     |
| Meningitis .....                  | 7     | 6       | 7    | 6      | 5      | 8        | 13    |
| Pneumonia.....                    | 91    | 49      | 69   | 71     | 119    | 21       | 140   |
| Bronchitis .....                  | 44    | 11      | 17   | 38     | 38     | 17       | 55    |
| Consumption.....                  | 75    | 41      | 64   | 52     | 115    | 1        | 116   |
| Cancer .....                      | 19    | 3       | 7    | 15     | 22     |          | 22    |
| Congestion of Brain.....          | 6     | 1       | 4    | 3      | 6      | 1        | 7     |
| Bright's Disease (Nephritis)..... | 23    | 8       | 20   | 11     | 31     |          | 31    |
| Diarrhœa (Enteritis).....         | 23    | 10      | 24   | 9      | 23     | 10       | 33    |
| Cholera Infantum .....            | 1     | 2       | 1    | 2      |        | 3        | 3     |
| Dysentery.....                    | 4     | 2       | 4    | 2      | 6      |          | 6     |
| Debility, General .....           | 1     | 4       | 4    | 1      | 5      |          | 5     |
| “ Senile .....                    | 23    | 21      | 13   | 31     | 44     |          | 44    |
| “ Infantile.....                  | 2     | 8       | 5    | 5      |        | 10       | 10    |
| All other causes .....            | 265   | 116     | 185  | 196    | 275    | 106      | 381   |
| TOTAL .....                       | 613   | 297     | 448  | 462    | 713    | 197      | 910   |

Still-born Children—White, 36; colored, 18; total, 54.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 39.90; colored, 51.28; total, 42.99.

## DIPHTHERIA RECORD FOR DECEMBER, 1890.

| District. | CASES. |          |        | District. | DEATHS. |          |        |
|-----------|--------|----------|--------|-----------|---------|----------|--------|
|           | White. | Colored. | Total. |           | White.  | Colored. | Total. |
| 1         | 7      | 1        | 8      | 1         | 3       | 1        | 4      |
| 2         | 1      | 3        | 4      | 2         | 1       | 3        | 4      |
| 3         | 7      |          | 7      | 3         | 4       |          | 4      |
| 4         | 3      |          | 3      | 4         | 2       |          | 2      |
| 5         |        |          |        | 5         |         |          |        |
| 6         | 1      |          | 1      | 6         |         |          |        |
| 7         |        |          |        | 7         |         |          |        |
|           | 19     | 4        | 23     |           | 10      | 4        | 14     |

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

## METEOROLOGICAL SUMMARY—DECEMBER.

STATION—NEW ORLEANS.

| Date..... | TEMPERATURE. |     |      | Precip. in<br>inches and<br>hundredths. | SUMMARY.                                                      |
|-----------|--------------|-----|------|-----------------------------------------|---------------------------------------------------------------|
|           | Mean         | Max | Min. |                                         |                                                               |
| 1         | 60           | 72  | 49   | 0                                       | Mean barometer, 30.216.                                       |
| 2         | 64           | 74  | 53   | 0                                       | Highest barometer, 30.546, 28th.                              |
| 3         | 68           | 76  | 59   | .02                                     | Lowest barometer, 29.840, 3d.                                 |
| 4         | 56           | 67  | 46   | 0                                       | Mean temperature, 56.4.                                       |
| 5         | 66           | 77  | 56   | 0                                       | Highest temperature, 80, 6th; lowest, 35, 9th.                |
| 6         | 72           | 80  | 65   | T                                       | Greatest daily range of temperature, 29, 10th.                |
| 7         | 62           | 69  | 56   | .82                                     | Least daily range of temperature, 5, 26th.                    |
| 8         | 46           | 50  | 41   | 0                                       | MEAN TEMPERATURE FOR THIS MONTH IN—                           |
| 9         | 43           | 51  | 35   | 0                                       | 1871.....55.5 \| 1876.... 47.0 \| 1881.... 59.2 \| 1886.... 51.6 |
| 10        | 52           | 66  | 37   | 0                                       | 1872.....51.1 \| 1877.... 55.6 \| 1882.... 54.0 \| 1887.... 52.0 |
| 11        | 64           | 76  | 51   | 0                                       | 1873.....56.5 \| 1878.... 50.8 \| 1883.... 60.3 \| 1888.... 51.2 |
| 12        | 54           | 59  | 50   | 0                                       | 1874.....58.6 \| 1879.... 59.5 \| 1884.... 58.7 \| 1889.... 64.3 |
| 13        | 44           | 48  | 40   | 0                                       | 1875.....61.6 \| 1880.... 52.9 \| 1885.... 53.1 \| 1890.... 50.4 |
| 14        | 51           | 62  | 40   | 0                                       | Total deficiency in temp'ture during month, 28.               |
| 15        | 56           | 64  | 48   | 0                                       | Total excess in temp'ture since Jan. 1, 446.                  |
| 16        | 57           | 64  | 50   | 0                                       | Prevailing direction of wind, S. E.                           |
| 17        | 50           | 56  | 44   | 0                                       | Total movement of wind, — miles.                              |
| 18        | 51           | 59  | 43   | 0                                       | Extreme velocity of wind, direction, and date,                |
| 19        | 54           | 65  | 43   | 0                                       | 30 miles, W., 25th.                                           |
| 20        | 58           | 70  | 46   | 0                                       | Total precipitation, 2.58 inches.                             |
| 21        | 60           | 72  | 49   | 0                                       | Number of days on which .01 inch or more of                   |
| 22        | 58           | 70  | 46   | 0                                       | precipitation fell, 3.                                        |
| 23        | 62           | 70  | 53   | 0                                       | TOTAL PRECIPITATION (IN INCHES AND HUNDRETHS)                 |
| 24        | 60           | 68  | 52   | 0                                       | FOR THIS MONTH IN—                                            |
| 25        | 62           | 67  | 58   | 1.74                                    | 1871... 1.46 \| 1876... 0.57 \| 1881... 6.62 \| 1886... 2.57     |
| 26        | 46           | 49  | 44   | T                                       | 1872... 5.25 \| 1877... 4.96 \| 1882... 4.27 \| 1887... 7.50     |
| 27        | 49           | 56  | 42   | 0                                       | 1873... 1.79 \| 1878... 8.60 \| 1883... 3.47 \| 1888... 3.68     |
| 28        | 45           | 51  | 39   | 0                                       | 1874... 3.47 \| 1879... 2.90 \| 1884... 8.01 \| 1889... 0.67     |
| 29        | 54           | 66  | 41   | 0                                       | 1875... 5.15 \| 1880... 0.45 \| 1885... 4.38 \| 1890... 2.58     |
| 30        | 58           | 69  | 48   | 0                                       | Total deficiency in precip'n during month, 2.29.              |
| 31        | 62           | 71  | 54   | 0                                       | Total deficiency in precip'n since Jan. 1, 21.19.             |
|           |              |     |      |                                         | Number of clear days, 14; partly cloudy days,                 |
|           |              |     |      |                                         | 10; cloudy days, 7.                                           |
|           |              |     |      |                                         | Dates of Frost, 10th, 19th.                                   |
|           |              |     |      |                                         | Mean maximum temperature, 65.0.                               |
|           |              |     |      |                                         | Mean minimum temperature, 47.7.                               |

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, Sergeant, Signal Corps Observer.



PUBLISHERS'



DEPARTMENT.

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# The New Orleans Medical and Surgical Journal.

Subscription, Three Dollars per annum, in advance.

Advertisements, as per Printed Schedule mailed to applicants.

NEW SERIES:  
Whole No. 314.

**FEBRUARY, 1891.**

VOL. XVIII.  
No. 8.

## NEW ADVERTISEMENTS IN THIS ISSUE.

|                           | PAGE.   |                                                        | PAGE. |
|---------------------------|---------|--------------------------------------------------------|-------|
| Antikamnia.....           | cover 3 | Chicago Post-Graduate Medical School and Hospital..... | 20    |
| Baker & Co., Jno. C.....  | cover 3 | Reed & Carrick.....                                    | 33    |
| California Fig Syrup..... | 11      | Wayne's Diuretic Elixir.....                           | 12    |

## INDEX TO ADVERTISEMENTS.

|                                            | PAGE. |                                          | PAGE. |
|--------------------------------------------|-------|------------------------------------------|-------|
| Arlington Chemical Co.....                 | 14    | N. Y. Pharmaceutical Co.....             | 6     |
| Baker's Breakfast Cocoa.....               | 30    | N. Y. Post-Graduate Medical College..... | 22    |
| Baltimore Medical College.....             | 18    | Peacock's Bromides.....                  | 24    |
| Battle & Co.....                           | 13    | Pomeroy Truss Co.....                    | 30    |
| Bellevue Hospital Medical College.....     | 30    | Planten's Capsules.....                  | 15    |
| Boehringer & Soehne.....                   | 10    | Robinson-Pettet Co.....                  | 2     |
| Bowden Lithia Springs Co.....              | 25    | "Sanitas" Antiseptics, etc.....          | 1     |
| Celerina.....                              | 21    | Schiefelin & Co., W. H.....              | 3     |
| Cerebro-Spinant— I. O. Woodruff & Co.....  | 23    | Sharp & Dohme.....                       | 19    |
| Claudel, Optician.....                     | 18    | Svain's Rectal Instruments.....          | 20    |
| Cook, Gus.....                             | 18    | Tarrant & Co.....                        | 17    |
| Diobiburnia.....                           | 27    | Tasteless Quinine.....                   | 15    |
| Ford's Digestive Tablets.....              | 29    | The New Orleans Polyclinic.....          | 28    |
| Health Restorative Co.....                 | 4     | The Wm S. Merrell Chemical Co.....       | 9     |
| Herrick Uterine Supporter.....             | 18    | The R. H. de Co.....                     | 24    |
| Kentucky School of Medicine.....           | 18    | University of Wooster, Medical Dept..... | 31    |
| Maltine.....                               | 8     | Victor Safe and Lock Co.....             | 26    |
| Marchand's Peroxide of Hydrogen.....       | 34    | Wagner Medical Manufacturing Co.....     | 7     |
| Mariani & Co.....                          | 5     | Wheeler's Tissue Phosphates.....         | 15    |
| Martin's Vaccine Virus.....                | 18    |                                          |       |
| McDermott, A.....                          | 15    |                                          |       |
| Medical Dept of the Tulane University..... | 15    |                                          |       |
| Mellin's Infants Food.....                 | 1     |                                          |       |
| Moore-McGregor Medication.....             | 18    |                                          |       |
| New York Medical Journal.....              | 19    |                                          |       |

### COVER.

|                               |   |
|-------------------------------|---|
| Fairchild Bros. & Foster..... |   |
| Fellows, James I.....         | 1 |
| Sharp & Dohme—Chemists.....   | 2 |

**N. B.** Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

## PUBLISHERS' NOTES.

**BOWDEN LITHIA WATER**—under seal—by the gallon. Doctor, try it.

The office of the **HEALTH RESTORATIVE Co.** has been removed to No. 90 South Fifth Avenue, New York, where they will be pleased to welcome all visiting physicians.

He who assists the physician benefits the race. Use **Georgia Bromine Lithia Water, Doctor.**

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ONE of the most progressive advertising agents in the country lately wrote us: "I note that you carry an unusually large line of advertisements, which leads me to think that you give considerable care and attention to your advertising department. You have a good journal and merit the business." We appreciate the compliment, and think that our advertising patrons will agree with the writer of the above encouraging words, that we do merit the business because we give care and attention to the interests of our advertisers.

It is on this point we desire to again address our subscribers. There is no branch of business that can exist to-day without advertising. Likewise there is no successful business man who does not post himself through the medium of advertisements. It would be writing a truism to say that the medical profession can not succeed without the aid of the manufacturing chemists and pharmacists, and the makers of instruments, appliances, etc. Do away with the host of purveyors to the medical profession, such as advertise in our pages, and the status of the profession would be relegated to comparative uselessness.

Therefore the progressive physician should keep himself posted regarding the improvements made in the many valuable auxiliaries provided for him. He is certainly anxious that his efforts should attain the best results. Poor tools make a poor job. But one must know how to procure the best tools, and how can a prescriber of medicinal compounds better post himself concerning them than by carefully considering the claims made by the various compounders? If our advertising pages are consulted they will be found to contain the announcements of the leading and most reliable firms in this country. Many of them ask, and all of them will be pleased to comply, that physicians send for samples in order that their goods may be personally and practically tested by the prescribers. Surely this provides an easy method of determination, the results of which may be of inestimable value in the physician's practice. And certainly the very important position held by the manufacturers toward the profession entitles them at least to a consideration and examination of their products. The obligation ends there. The physician is the judge of the value. To that arbitrament not one of our advertisers object. Their goods are presented on their merits—they rest their case there.

DOCTOR, have you tried the famous Bowden Lithia Water?

## CHRONIC LARYNGITIS.—

R. S.H. Kennedy's Ext. Pinus Canadensis (dark)..... 1 oz.  
 Drosera rotund..... ½ oz.  
 Pure glycerine..... 4 oz.

M. Sig.: Fifteen to thirty drops three or four times per day. Also in nasal catarrh I think it almost a specific.

EIGHT patients are being treated in the New York Post-Graduate Hospital by Koch's lymph. Three of them are cases of lupus; four are cases of phthisis pulmonalis and one laryngeal tuberculosis. The inoculations are in charge of Dr. W. C. Bailey, who was for a long time a student in Koch's laboratory, assisted by the director of the laboratory, Dr. J. H. Kinsley.

A CASE IN POINT.—A prominent manufacturer, Mr. T., living in New Jersey, consulted me some eighteen years ago in reference to certain distressing symptoms which to his mind presaged apoplexy. As two brothers of his had died recently of that disease with the same premonitory symptoms, I did not feel justified in saying that his fears were groundless.

Good feeders and torpid bowels told the story.

I ordered a large teaspoonful of Tarrant's Seltzer Aperient in half a tumbler of water before breakfast and his trouble soon disappeared, and he is living to-day hearty and well, and has often told me since that the Aperient saved his life.

Lewisburg, Pa., October 7, 1890.

P. F. HYATT, M. D.

#### NEW ORLEANS.

NOTWITHSTANDING generally refusing testimonies in favor of particular drugs, in the case of "Vin Mariani" I will make an exception, believing it a most reliable and safe tonic, frequently truly beneficial.

DAN'L C. HOLLIDAY, M. D.

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Don-ju-Ann, Ind.

PORT LUDINGTON, MICH., September 24, 1890.

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Gentlemen—A few days ago I received your Antikamnia, which I have prescribed and found very satisfactory indeed. In influenza, which disease is very prevalent here just now, I find it as much of a specific as quinine is in ague. It is, indeed, one of the needful remedies, and should be in the hands of every practitioner.

Yours respectfully,

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SAN FRANCISCO, California, July 17, 1890.

I HAVE postponed acknowledging receipt of FEBRICIDE PILLS so that I could note their effect in a case where I am using them. The patient is a young lady of 21 years, who was complaining of extreme malaise and nausea; from questioning, etc., I formed an opinion that the case was malarial, and consequently exhibited the FEBRICIDE, one pill three times daily. She has been taking them now for exactly one week, and upon seeing her to-day, find that, as she expressed it, "feeling herself again." I shall prescribe these pills in the future whenever they may be useful.

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THE preparations of "HYPOPHOSPHITES," "COCA," "PEPSIN," etc., made by "MESSRS. R. A. ROBINSON & Co.," are indorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well-known manufacturing house. (See page 2.)

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NASHVILLE, Tenn., March 20, 1890.

I HAVE for years used with satisfaction Hayden's Viburnum Compound in all forms of Dysmenorrhœa, threatened Abortion, and in a few instances nausea of pregnancy. In the latter I invariably give it by enema.

---

J. H. BLANKS, M. D., Professor of Theory and Practice of Medicine, Medical Department, University of Tennessee.

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## OUR MARCH ISSUE

*Will contain a report of*

THE RESULTS OBTAINED WITH KOCH'S TREATMENT IN NEW ORLEANS,  
*It will also contain a paper by* DR. A. B. MILES, *of New Orleans, treating of*  
 A GUNSHOT WOUND OF THE ABDOMEN.

Messrs. JOHN C. BAKER & Co.

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*Professor of Anatomy in the University of Penna.*

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"A UNIQUE CASE OF STAB WOUND OF  
THORAX AND ABDOMEN-RECOVERY."

BY A. V. L. BROKAW, M.D., ST. LOUIS, MO.

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MARCH, 1891.

WHOLE No. 315.

No. 9.

*Paullum sepultæ distat inertie  
Celata virtus.—HORACE*

The

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### TABLE OF CONTENTS.

|                                                                                                                                                          | PAGE. |                                            | PAGE. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------|-------|
| Report of a case of Gunshot Wound of the Abdomen, with three Mesentric, and Sixteen Intestinal Wounds; Abdominal Section; Recovery.—By A. B. Miles, M. D | 661   | The Treatment of Acute Anemia by Intusion. | 695   |
| Sanitary Analysis of Mississippi River Water—By A. L. Metz, Ph. D.                                                                                       | 664   | Tubercular Synovitis of Knee               | 707   |
| A Review of Dr. Koch's Discovery, with some reflections—By F. W. Parham, M. D                                                                            | 666   | Lupus Vulgaris of Face and Neck            | 710   |
| Pyorrhœa of the Antrum—By A. Friedrichs M. D.                                                                                                            | 683   | The State Medical Society                  | 722   |
| PROCEEDINGS OF SOCIETIES:                                                                                                                                |       | On Catgut Infection                        | 726   |
| Gynecological and Obstetrical Society of Baltimore, Md                                                                                                   | 683   | Medicine                                   | 729   |
|                                                                                                                                                          |       | Surgery                                    | 731   |
|                                                                                                                                                          |       | Book Reviews and Notices                   | 732   |
|                                                                                                                                                          |       | Publications received                      | 735   |
|                                                                                                                                                          |       | Medical Items                              | 739   |
|                                                                                                                                                          |       | Mortuary Report.—January, 1891             | 737   |
|                                                                                                                                                          |       | Meteorological Summary, January, 1891      | 738   |
|                                                                                                                                                          |       | Publishers' Department                     | 739   |

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# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XVIII.

MARCH, 1891.

No. 9.

## ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

### REPORT OF A CASE OF GUNSHOT WOUND OF THE AB- DOMEN, WITH THREE MESENTERIC AND SIXTEEN INTESTINAL WOUNDS; ABDOMINAL SECTION; RECOVERY.\*

By A. B. MILES, M. D., SURGEON TO THE CHARITY HOSPITAL, NEW ORLEANS, LA.

On the morning of September 11, 1890, F. II., while carelessly handling a thirty-two calibre pistol, shot himself in the abdomen, the missile entering in the median line at a point midway between the umbilicus and the pubes. An ambulance was at once summoned, and within half an hour the patient was placed in the operating room of the Charity Hospital.

His physical condition was, in every respect, excellent. He was a young white man, aged 24 years, of slender frame, but strong, and weighed about one hundred and thirty pounds. Fortunately he had eaten sparingly for several days, owing to some slight indisposition. There were evidences of shock, but not in marked degree. His pulse was 108. He complained of abdominal pain only.

Having determined that the ball had entered the abdominal cavity, and being convinced that the missile, delivered at such short and direct range, had inevitably injured the viscera or vessels, we at once decided upon active surgical treatment.

\*Read, by title, before the Southern Surgical and Gynecological Association, November 12, 1890.



The operation was performed in the presence of our resident medical staff, and with the aid of Dr. J. D. Bloom, the assistant house surgeon, who also, with the assistance of Mr. E. D. Martin, conducted most of the after-treatment during my absence from New Orleans.

Median abdominal section was performed, the incision being four or five inches long. There was considerable blood in the peritoneal cavity, and the hemorrhage was still unchecked. The perforations were soon revealed in the protruding intestines. We at once instituted a systematic search for the bowel wounds, passing the small intestine in review from the beginning of the jejunum to the end of the ileum. The bullet, after entering the cavity, ranged a little to the left, wounded the mesentery in three places, perforated the small intestine sixteen times, and lodged somewhere in the deep muscles of the back. The man having eaten but little for several days, the intestines were practically empty, and this fact alone explains the number of intestinal wounds. A bullet, passing in any direction, could scarcely have inflicted so many wounds in a bowel even moderately distended. The condition which explains the large number of mesenteric and intestinal perforations also contributed very materially to the successful termination of the case. Aside from a small amount of mucus and blood, nothing escaped from the bowel wounds. All operators know that in these cases no accident more seriously complicates the operation than fæcal extravasation, a danger which this case fortunately escaped.

The operation was necessarily very tedious, lasting a little more than two hours. The mesenteric vessels were still bleeding, and their ligation consumed a considerable part of the time. The intestinal wounds were closed with Lembert sutures of fine silk passed in the direction of the bowel. This plan seems least calculated to contract the calibre of the gut. Hemorrhage having been arrested and the visceral wounds closed the peritoneal cavity was douched with sterilized hot water, the abdominal incision sutured with silk and the usual antiseptic dressings of the hospital were applied.

The dressing was renewed on the eighth day and the deep

abdominal sutures removed. The superficial sutures were removed on the twelfth day.

On the evening of September 11, the day of the operation, the temperature registered  $98\frac{1}{2}$  deg. F; the pulse 115. A hypodermic injection of sulphate of morphine  $\frac{1}{4}$ -grain and sulphate of atrophine  $\frac{1}{50}$  grain was administered.

On the evening of the following day the temperature rose to 102 deg. F.; the pulse to 150 per minute. These changes were attributed to our generosity in feeding. The above temperature, representing the highest point of the record, was promptly reduced by ten grains of antipyrine administered hypodermically. On several subsequent occasions the temperature exceeded 101 deg. F., but during the confinement in bed it was usually about 99 deg. F. The pulse was generally in accord with the temperature. After the first week, however, the pulse often beat about 60, and occasionally less (54) per minute.

From the second until the seventh day after the operation the patient was nourished exclusively by rectal alimentation. Only water, in quantities of half an ounce at a time, was given by the mouth. Food by the mouth was allowed on the seventh day, but was given very sparingly—teaspoonful potions of chicken tea, boiled milk and Ducro's elixir. The quantity of nutriment by the mouth was gradually increased until the thirteenth day, when the patient was given a breakfast of a soft-boiled egg, crackers and a cup of coffee. In the meantime the little food given in the natural way was supplemented by rectal feeding.

On September 30, dietary restrictions as to quality were removed, and the patient was only guarded against an excessive quantity.

On the fifth day after the operation the intestinal gases escaped naturally, and on the twentieth day there was a voluntary faecal evacuation.

The patient remained in the hospital until October 18—five weeks—and from that date until the present writing, November 10, has remained perfectly well. He affirms that his alimentary functions are in every respect perfectly normal.

This report is intended simply to add one more case to the growing list of successful enterorrhaphies for gunshot wounds, the only remarkable feature in the case being the unusual number of peritoneal and intestinal perforations—nineteen in all.

NOTE.—At the present time, January 22, 1891, the patient appears to be in perfect health, having gained considerably in weight and improved very much in blood coloring since his recovery.

---

### SANITARY ANALYSIS OF MISSISSIPPI RIVER WATER.

By A. L. METZ, PH. G.

About the latter part of January, 1890, I received a communication from Dr. Wilkinson, then president of the Louisiana State Board of Health, requesting the writer to make several sanitary analyses of Mississippi river water. The analysis appeared to be necessary, to settle a controversy between the Health Committee of the City Council and the Louisiana State Board of Health; the question in controversy was brought about by a petition from the New Orleans Board of Trade, asking the privilege of laying a sewer pipe from its building to the river. The stand taken by a member of the Health Committee of the Council was to the effect that the sewer from the Charity Hospital was already a nuisance, and objected strongly to the laying of another sewer entering the river in the proximity of Canal street for fear of contaminating the water supply of steamboats and other vessels. Acting upon the suggestion of Dr. Wilkinson, water was collected at about the time the sewage from the hospital was entering the river at the foot of Customhouse street.

Eight samples of water were collected at different points in the river, in the presence of two members of the Health Committee, and the chief sanitary inspector, Dr. Blanc. Great care was exercised to obtain samples which would give sewage contamination. Special attention was given to the collection of water from the eddy which runs along the city front, from Ur-



TABULATED REPORT OF THE SANITARY ANALYSIS OF MISSISSIPPI RIVER WATER, BY A. L. METZ, PH. G.  
Analytical Results Upon the Mississippi River Water. Expressed in Parts per 100,000.

| Suspended matter. | Inor-<br>ganic<br>120. | Or-<br>ganic<br>147. | Solids in so-<br>lution.<br>46. | Chlorine.<br>11.3 | Phosphates<br>Heavy<br>Traces. | Free ammo-<br>nia<br>0.06 | Albumin'id<br>Ammonia<br>0.005 | Nitrates<br>0.18 | Nitrites<br>0.79 | Oxygen con-<br>sum'g power.<br>0.5 |                                                                                  |                                                                                                                      |                                                                       |                                                                       |                                                                               |                          |                                                                                                                                           |                                                                              |                                                                                            |                                                         |                                                              |                                                              |                                                           |                                                           |                                                                                                                    |                                                                 |                                                                        |                                                             |  |  |
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|                   |                        |                      |                                 |                   |                                |                           |                                |                  |                  |                                    | 1. Foot of Canal street, 30 feet from shore,<br>5 feet below surface; 4:15 P. M. | 2. Foot of Customhouse street, 30 feet from<br>shore, 3 feet below surface. This was<br>collected between two boats. | 3. Fifty yards below the sewer discharge<br>pipe, 10 feet from shore. | 4. Fifty yards below the sewer discharge<br>pipe, 30 feet from shore. | 5. One hundred yards below the sewer dis-<br>charge pipe, 45 feet from shore. | 6. Current of the river. | 7. Foot of Customhouse street, 45 feet from<br>shore; collected 1 hour and 10 minutes<br>after the emptying of Charity Hospital<br>sewer. | 8. Foot of Julia street, middle of eddy;<br>1¼ hours after sewage discharge. | 9. Service pipe, Laboratory, after running ½<br>hour; collected 11:40 A. M., Feb. 2, 1890. | 10. Service pipe, Laboratory, 8 P. M., Feb. 2,<br>1890. | 11. Service pipe, Laboratory, 9:45 A. M.,<br>March 14, 1890. | 12. Service pipe, Laboratory, 9:20 A. M.,<br>March 21, 1890. | 13. Service pipe, Laboratory, 1 P. M., March<br>14, 1890. | 14. Service pipe, Laboratory, 1:15 P. M., May<br>8, 1890. | During the months of June, July, August<br>and September no analyses were made<br>on account of absence of writer. | 15. Latter part of October, time of collection<br>not recorded. | 16. December 13, from service pipe on Dry-<br>ades street, 10:40 A. M. | 17. Service pipe, Laboratory, January 11,<br>1891, 11 A. M. |  |  |
|                   |                        |                      |                                 |                   |                                |                           |                                |                  |                  |                                    |                                                                                  |                                                                                                                      |                                                                       |                                                                       |                                                                               |                          |                                                                                                                                           |                                                                              |                                                                                            |                                                         |                                                              |                                                              |                                                           |                                                           |                                                                                                                    |                                                                 |                                                                        |                                                             |  |  |
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subline to Julia street, and which receives the sewage entering the river. In this eddy most of the steamboats lie, and these draw their supply of potable water from this locality. Seven samples were drawn from the eddy, one from the current of the river, and which shows the minimum amount of albuminoid ammonia, as will be seen by referring to the tabulated report. In addition to the samples collected as above stated, the writer thought it highly necessary that a sanitary analysis of the water as supplied and delivered through the service pipes be made. The result is seen in sample No. 9, and shows the highest amount of albuminoid ammonia, with the one exception of No. 1, which was taken almost at the very mouth of the sewer of the St. Charles Hotel.

Sample No. 9, was drawn from the laboratory service pipe after the faucet had been open for half an hour.

Since then, almost monthly examinations have been made of the water supply furnished through our service pipe. The writer refrains from expressing any opinion at present, as a thorough investigation will be resumed at a very early date, and is now in progress.

## A REVIEW OF DR. KOCH'S DISCOVERY, WITH SOME REFLECTIONS. \*

By F. W. PARHAM, M. D., NEW ORLEANS, LA.

In an address on bacteriological research, delivered before the 10th International Medical Congress in August, 1890, Dr. Koch refers to the great advance made in bacteriology in the last ten years, dwelling with special emphasis upon the results of investigations of tuberculosis.

He discusses first the causal relation of bacteria to infectious diseases. He then refers to the "results which the investigation of bacteria has yielded in relation to their metabolic products," some of which have peculiar poisonous effects, which possibly have some influence on the symptoms of infectious diseases, "perhaps, *indeed*," he says, "cause the most important of

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\* Read before Orleans Parish Medical Society, Januar; 26, 1891.

them." Of quite special interest he regards "the recently discovered poisonous albuminous substances, the so-called tox-albumins," obtained from cultures of anthrax, diphtheria and tetanus.

He then considers very briefly the question of immunity, expressing the belief that the theory of a kind of struggle between the invading parasites on the one hand and devouring phagocytes on the other was steadily losing ground, and that "here also it is most probable that chemical processes play the chief part."

In answer to the question, of what practical benefit has all this bacteriological work been, he mentions what has been accomplished in disinfection, the control of water filtration, the filtering properties of the soil and the consequences resulting therefrom, the purification of milk, examination of sewers, the possibility of diagnosing sporadic cases of Asiatic cholera and the first stages of pulmonary tuberculosis, and so on. These are benefits which can only be indirectly employed as therapeutical agents. The only ones which can be adduced as directly acting agents are the "results which Pasteur and others have obtained by means of protective inoculation in rabies, anthrax, quarter evil, and swine erysipelas." Notwithstanding these insignificant results he believed that bacteriology would one day be of the greatest importance from a therapeutical point of view. With diseases of short incubation period, the results therapeutically would be of less importance; here the chief reliance having to be placed on prophylaxis; but with diseases of less rapid course, offering, as they did, more points for therapeutic attack, the matter was more hopeful. On this account and because of its vast practical importance there was scarcely a disease that so challenges bacteriological investigation as tuberculosis.

"Moved by these considerations, very soon after the discovery of these tubercle bacilli, I set about," says he, "seeking for substances which could be used against tuberculosis therapeutically, and I have pursued this search, which has, of course, been often interrupted by my other occupations, perseveringly up to the present."

In the belief that there must be a remedy for tuberculosis, he asserted he did not by any means stand alone.



Billroth has expressed himself with all possible distinctness to the same effect, and many investigations have aimed at the same end. But Koch thinks they have not, as a rule, followed the right way, "inasmuch as they have begun their experiments on man."

Experiments must be made first on the parasites themselves in their pure cultures.

Now, if substances should be found which check the development of tubercle bacilli, experiments must not be forthwith tried on man, but on animals.

He proceeded according to these rules. He tested a very large number of substances to see what influence they would exert on the bacilli cultivated in pure cultures. Not a few substances were found to have the power of hindering, in even very small doses, the growth of tubercle bacilli. It has often, he says, erroneously been considered necessary to kill the bacilli in the body. In order to make them harmless it would be sufficient to prevent their growth, their multiplication.

I have thus drawn liberally upon the initial address of Dr. Koch, because I think this gives a fairer idea of his hopes, his motives and his methods of work, than his subsequent publications. This shows his thoroughness, his honesty and his caution in their best presentation.

We may complete at once the account of his investigation of the substance itself by referring to his latest utterance giving a description of the nature of the substance. With this you are all familiar. It will only be necessary to say, that the remedy is a 50 per cent. glycerine extract of a substance derived from the pure cultivation of the tubercle bacilli, that the effective substance is in extremely small amount, insoluble in absolute alcohol; that it appears to be a derivation from albuminoid bodies, but that it does not belong to the tox-albumins, as shown by the facts that it bears high temperatures and dialyzes easily and quickly. Here, then, we have a substance of the most powerful nature capable of producing decided effects. Delaying an explanation of the action of this remedy for the present, let us glance at the next publication of Koch, following his paper before the Medical Congress on the uses of the remedy.

I shall mention only the salient points.

The liquid is a brownish, transparent fluid, which keeps well in the concentrated form, but is liable to undergo decomposition when diluted with distilled water, bacterial growth soon developing in the solutions.

The substance is not destroyed by a considerable temperature, but its effect is weakened by frequent heating. Introduced into the stomach it has no effect; it must be used subcutaneously.

A healthy guinea-pig will bear two cubic centimeters, that is, about half drachm, without sensible effect, while in man the effect is more decided;  $25$  cu., c. c., produced in Koch himself, pains in limbs, fatigue, inclination to cough, dyspnœa, followed later by violent ague, with nausea, vomiting and fever of  $103.2$  deg. F. These symptoms subsided in twelve hours.

The lowest limit of effect in a healthy adult was .01 cu. c. in numerous experiments. With this dose as a starting point, a remarkable specific action in tuberculous patients has been demonstrated, so that Dr. Koch asserts most positively its value as a diagnostic test of tuberculosis. "The symptoms of reaction above described occurred," says he, "without exception in all cases where a tuberculous process was present in the organism after a dose of .01 cu. c. c."

"By its aid," says he, "we shall be able to diagnosticate doubtful cases of phthisis; for instance, cases in which it is impossible to obtain certainty as to the nature of the disease by the discovery of bacilli or elastic fibers in the sputum, or by physical examination." When we remember that Dr. Austin Flint was accustomed to say that he had been able by the microscopic discovery of sputum bacilli to make a diagnosis of tuberculosis some time before the physical signs indicated any trouble brewing, these diagnoses being afterward confirmed, we must regard this statement of Koch as a very bold one, and, if proved, an extremely valuable one.

Besides lung tuberculosis, affections of the glands, latent tuberculosis of bone, doubtful cases of tuberculosis of skin, and such like cases will easily and with certainty be recognized." We shall also be able to tell when our cases are cured.

Regarding its prophylactic action in man, Koch says nothing, but his experiments on animals demonstrated that a healthy animal protected by the remedy resisted all subsequent attempts at inoculation. This would be a great boon if it were possible to protect those unavoidably exposed to infection. But we have yet to collect data to show that such is the case. As regards its curative effect, Dr. Koch especially insists upon its early application to the disease.

Patients under treatment for the first stage of phthisis might be pronounced cured in from four to six weeks; patients with cavities not too highly developed were improved considerably; in those with many large cavities no improvement could be objectively proved. He believed that incipient phthisis could be cured "with certainty."

Lupus, glandular, bone and joint tuberculosis in early stages could be cured: in later stages improved.

He warns against a conventional and indiscriminate application of the remedy in all cases of tuberculosis, but he says nothing of the actual harm which subsequent experience has shown may be done by the remedy. Concerning the mode of action of the remedy, I gather partly from his second communication, partly from his third giving the nature of the remedy, the following statements:

The remedy injected does not kill the bacillus directly, but gives rise to Weigert's coagulation—necrosis of tissue containing bacilli; it does not affect dead tissues, nor living tissues containing no bacilli, but only *living* tissues *containing* them, that is tuberculous living tissues. This necrosis being produced, the bacilli either die of inanition or get away and are thrown off in the excretions. This necrotizing effect is exactly the same as that produced by the bacillus itself, as illustrated by the great number of bacilli in the spleen and liver of an animal recently attacked with tuberculosis, and their almost total absence later when coagulation necrosis has converted the organ into whitish substance.

The Koch injection, in Koch's opinion, simply adds necrotizing substance to the vicinity of the working bacilli and the necrosis is hastened and its area extended. The soil is rendered more unfavorable for the bacilli, and they must either



get out or die. That they do get out, not of the body, but into surrounding tissue, seems shown by some autopsies of Virchow, who was inclined to think that the remedy sometimes may disseminate the bacilli and set up new tubercular foci, thus doing positive harm.

The remedy may cure them whenever the bacilli become pent up by encysting walls or are situated favorably for elimination from the body and when the dead masses may be thrown off, or absorbed, or if they remain, become encysted and cease to act as foreign bodies. Surgical operation, then, may often assist and may be often required in effecting a cure.

Having now stated as fairly as I can Koch's own views of the mode of action, the indications and the limitations of the remedy, it will be well for us to glance at the experience of others with the remedy in order to see how far Koch may have been corroborated.

One of the best descriptions of the method and results I have seen from the great medical hegira of the nineteenth century is that of Dr. H. P. Loomis, of New York, who had excellent opportunities for studying the method and watching its results in Berlin. His paper will be found in the *New York Medical Record*.

I shall follow the plan adopted by him, in discussing the various points:

1. The fluid.
2. Method of inoculation.
3. Effects of inoculation, constitutional, local.
4. Therapeutic value.
5. Specific action.
6. Dangers.
7. Interesting cases.
8. Conclusions.

#### I.—AS TO THE FLUID.

That has already been described.

#### II.—AS TO THE METHOD AND DOSE.

The datum for determining the dose is that furnished by Koch, that .01 of c. c. the smallest dose that will produce perceptible symptoms in the healthy adult will produce almost

invariably decided symptoms in one affected with tuberculosis in any form. Starting from this information, the diagnostic test dose is taken as 1-1000 c. c. Koch's syringe is filled first with 10 per cent. sol. carbolic acid, then washed out with absolute alcohol; it is then aseptic. In some thousands of injections in animals Koch has had no abscess. One of the formulæ of the fluid is Koch's fluid 1 c. c., half per cent. carbolic acid, 100 c. c. One c. c. of this contains 1-100 c. c. of the original fluid. Koch's syringe holds 1 c. c. and is graduated to tenths. The 1 per cent. solution, then, to the first mark would contain 1-1000 part of a c. c. of the original fluid, or a milligramme, two-tenths per cent. of the 1 per cent. solution would be two milligrammes, and so on, an extremely easy way of calculating the dose. Reports of various observers I think will justify the following statements regarding the dose in various conditions:

1. In all cases where the dead mass can be readily eliminated or removed by the knife, the full dose of 0.1 c. c. of the original fluid or a syringe of the 1 per cent. solution *may* be given, though it might be better to begin with a smaller dose and rapidly increase to a dose that produces an effect. In lupus the large dose is given—the advantage being a more rapid and complete effect.

2. In incipient cases of lung tuberculosis, or in doubtful cases to be determined by the test, one milligramme is usually employed, increased milligramme by milligramme until effect is produced, generally from twelve to twenty-four hours intervening.

3. In advanced or extensive cases of tuberculosis, if used at all, the remedy should be applied with the greatest caution, for in such cases the amount of tissue destroyed makes the reaction violent. Some cases have proved fatal and others made much worse. The proper thing would seem to be to begin with an extremely small dose, say the  $\frac{1}{10000}$  part of a c. c. or one-half milligramme of the strong fluid and an increase by one-tenth of a milligramme till effect is produced. Especially susceptible seem the laryngeal cases, Gerhardt reporting violent œdema of glottis necessitating tracheotomy after one milligramme. Such cases should *never* be treated with the paratoloid unless a competent nurse could be constantly on watch,

In children, of course, the dose must be extremely small and varying both with the age and the stage and location of the tuberculosis.

I honestly believe that if such rules could be rigidly followed in all cases we would not hear of so many disasters. I believe, no matter how bad the case, there must be a dose that will produce no symptoms. The physical signs with the general symptoms in lung cases and the extent and severity of external cases should determine the dose. A milligramme being the dose for the mildest or for simply suspected cases, the different degrees of severity, determined as far as the most careful examination and observation for a sufficient time will permit, should have corresponding doses, giving below rather than above the minimum effective dose.

I shall return to this question of dose under the head of dangers.

### III.—EFFECT, CONSTITUTIONAL AND LOCAL.

In large dose very decided after from three to six hours, severe headache, limb and joint pains, chilly feelings, thirst and dryness of throat, sometimes nausea and vomiting. Cough and increased expectoration in pulmonary cases, with dispnoea—temperature 102 to 105 or over. Symptoms abate in twelve hours, fever keeping up longest. After this patients feel improved, but sometimes the pains and malaise continue for a number of days. Irregularities are frequent, Dr. Loomis mentioning one case where reaction was delayed *eight* hours. In another case it was seven and lasted over twenty-four hours.

As to the local signs, Dr. Loomis mentions that an Englishman, with lupus in the period of reaction, said he felt "as if a battle were going on in his face." Most observers give the same description as that given first by Koch.

In determining the effect of the remedy in pulmonary cases, I believe too much stress has been laid on the febrile reaction and not enough on the physical examination of the chest. Cases are reported where physical signs indicated decided reaction when the general symptoms were in abeyance, and others when with severe general reaction there was



noted little change in the chest as indicated by the physical signs.

But time forbids that I dwell on this section of the discussion.

#### IV.—THE THERAPEUTIC VALUE OF THE REMEDY.

In Lupus: Dr. Loomis' testimony: seventeen cases, all decidedly improved in a short time. One case, six years standing, had had six operations under ether with complete failure to check progress; after fifteen injections in eighteen days, returned to England cured. As to permanency of cure only time can determine. All observers are struck with its effect upon lupous tissues.

As to its effect in throat tuberculosis the following from the *British Medical Journal* seems not to over-state the matter.

Dr. Lennox Browne thus concludes a long and carefully written report: "When it is considered (1) that in none of the foregoing cases nor in any others now undergoing similar treatment in Berlin is any other remedy whatever employed as an adjunct to the injection, and (2) that the medical wards of the Charité Hospital, and the small rooms of the house in which Prof. Krause's patients are treated, are far from what we should consider favorable for tuberculous patients, we must admit that the beneficial effects of Koch's lymph, at least in throat cases, are, to quote the words of Sir Joseph Lister, "simply astounding." That further experience will confirm this opinion, no one who has visited Berlin during the last few weeks can entertain a doubt."

In lung tuberculosis the value of the remedy seems most in doubt. We believe no conclusions of importance can yet be drawn. Gerhardts seems, for example, disposed to abandon it for advanced cases, while Leyden has seen marked improvements in such cases. Loomis mentions a case he saw in Berlin. In one week after four injections softening and cavity were substituted for consolidation, dyspnoea became intense, respiration 60, and getting rapidly worse. The case was hopeless when he left Berlin. He attributed the result to too large and too frequent injections. He thinks the treatment in the Berlin hospitals subject to criticism. Insufficient investigations of cases, improper adherence to routine plan and failure to grad-

uate the dose to the case, these errors are the explanation of disastrous results in advanced cases. Koch's instructions were not followed. The unscientific treatment should be blamed, not Koch's method.

#### V.—SPECIFIC ACTION.

##### On the bacilli in expectoration :

In some cases notably diminished, after first injection; after several, absent; in other cases no diminution. In one case, bacilli in sputum, but no reaction after .02 c. c. In one case of pleurisy without cough or expectoration, expectoration after second injection with bacilli in sputum.

On the sputum: At first, increase; after third or fourth injection, decided diminution and less purulence.

On night sweats: In almost all cases, immediate cessation and no return (Loomis). General condition: Seldom gain in weight; evidence of patients flattering, but such statements unreliable.

#### VI.—DANGERS.

Loomis says a number of deaths reported in Berlin. Certainly a most powerful remedy. Power for good of a remedy seems proportional to power for harm. All observers seem impressed with the *power* of the remedy.

Loomis mentions following cases:

1. Phthisis with tubercular intestinal ulceration, necrotic changes, perforation, death.

2. Tubercular laryngitis, œdema threatening suffocation, tracheotomy.

3. Pleuritic effusion, first on one side, then on the other.

Loomis mentions as dangers the following:

1. Entrance into blood current of dead tubercular tissue containing bacilli.

2. Overwhelming of organism by miliary tuberculosis in different organs, not controllable by subsequent injections.

3. Violent reactions owing to extent of disease, patients seeming never to rally.

It is unnecessary for me to dwell further upon this phase of the subject, as the statements given are fair illustrations of the general experience, and definite conclusions can not be

drawn as yet from any number of cases so far presented. Time alone will tell.

#### SOME REFLECTIONS.

Koch has not demonstrated nor asserted that his substance can confer immunity in the human body, but he has rendered animals completely immune against injective tuberculosis by the use of large doses of the lymph, and Mr. Lister thinks such immunity could, perhaps, be attained in man by gradually increasing the size of the doses. This view seems quite a reasonable one to me in the light of the numerous investigations which have been carried on in the last eighteen months. Dr. Sibley, in *British Medical Journal*, even goes so far as to make reference to those cases of childhood glandular tuberculosis which have recovered, asserting that such cases are less liable to contract tubercular consumption later in life. I know of a family where the mother of three daughters died early. Two of these daughters died years afterward of tuberculosis. The third, who was always regarded as the most delicate of the three, still lives, in better health than she has ever enjoyed, having never had tuberculosis in any form at any time.

Can it be that immunity was impressed upon her through the mother's blood before birth or through the nursing milk after birth? Fakker describes experiments that lead him to believe that fresh milk has a bacteria-killing power. Boiling destroys this power and bacteria-killing power of fresh milk vanishes in the act of killing the microbes: the milk then becomes an excellent culture medium. Might not it be either that the mother was suffering of a mild form of tuberculosis during this immune daughter's gestation or that during lactation exceedingly small quantities of the chemical poison was being carried through the milk, which either contained only the chemical product, or if the bacilli, in small numbers, were present in it, they were killed either by the milk itself or in the processes of digestion in the child's alimentary canal, only the chemical antidote being taken up by the child's blood. It would be necessary, to strengthen this theory, to suppose that at the birth of the other children the tuberculosis was latent, that no immunity producing substance was conveyed over to



the children, the children inheriting, however, the tubercular diathesis, that is, the suitable. They all, then, in this view of the matter are to be considered as having the suitable structure, and all being equally exposed to the invasion of tubercle bacilli.

The difference, however, would be that in two tuberculosis resulted from the concurrence of soil and entrance of the tubercle plant, but that in the third, though the same concurrence obtained, the disease failed to occur because the otherwise suitable soil was impregnated by a chemical substance which conferred immunity. It occurs to me just at this connection, that experiments might be tried with milk freshly drawn from a mother suffering with tuberculosis to determine the possibility of conferring immunity, of course, in animals. It would be interesting, too, to determine definitely, by clinical observation, whether children nursing tuberculous mothers were more or less disposed to tuberculosis, and whether the stage of the disease in the mother would have any influence in conferring immunity or in producing greater liability, mild cases accomplishing the former, advanced ones increasing the risk of infection subsequently. This may seem absurd, but the interesting experiments carried on by Hankin in 1889 in Koch's laboratory showed that he could use an albumose of the anthrax bacillus in various doses and produce various effects.

A small dose conferred immunity in time against subsequent inoculation with the violent bacillus, while after a large dose they died much more promptly than control animals, which had had no protective injection. This indicates to my mind an explanation of some of the disastrous results following the application of Koch's lymph to some cases of tuberculosis. The dose was too large and actually increased the susceptibility of the general tissues at the same time that the bacilli were driven out from their focus into other previously non-infected tissues. I am forced to the conviction that if there is truth at all in Koch's method, then there is a great deal of truth in it. Indeed, I can not see why any case may not be *beneficially* treated up to the generalizing of the tuberculosis. Of course, some are past the possibility of recovery. I speak now

of degrees of benefit up to the point of cure of cases that are curable. We must find the proper dose. Many cases have been damaged. There is no question about that. The dose was too large. Might not infinitesimal doses, repeated from time to time, confer immunity, when larger doses would cause an explosion? Idiosyncrasy must be considered here as with other potent chemical medicines. This reflection, I might, too, here remark lessens somewhat the value of the remedy as a diagnostic test.

I might, then, say at once that I believe small enough doses may be safely administered to any localized case and after a prolonged period confer immunity. Koch enjoins upon us extreme caution. We are in too much of a hurry. The true value of the method will not be known for many months, may be years.

There are two ways of cutting short the tubercular process:

1. Kill the bacilli.

2. Render the other tissues immune, or render the blood simply immune.

This subject of immunity is one of the greatest interest and importance. What is it and how is it produced, and what is the nature of the substances conferring it? These are weighty questions, at which I can merely take, as it were, a passing glimpse. What is *meant* by the term immunity is clear enough, but how much the word implies is uncertain. Is there such a thing as absolute immunity which will not bear out or will resist extraordinary doses of the disease poison? Second attacks of small-pox are well recognized; so with some the diseases as yellow fever and the like. Here immunity has worn out. This consideration alone would favor the view of Pasteur, Brunton and Lister, and thus that immunity involves the idea of toleration.

\* "There are two ways in which the body may be protected against attacks of pathogenic virus—organisms. The first of these we owe to Pasteur." In its use is made of cultures attenuated in various ways, heating, exposure to air, etc. Here we inject the germ itself. This is shown by the fact that such

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\* British Medical Journal.

protective material may by proper handling be cultivated up to the original virulence.

In the other method use is made of the *products* of bacterial activity—no organisms. There are three explanations of immunity, produced by either plan.

1. Metschnikoff's phagocytosis theory.
2. Bacteria-killing power of the blood.
3. Toleration, acquired.

There are some good arguments in favor of the phagocytic action of the normal body cells. Surgery in old times, without antiseptics, could not have accomplished its great results without admitting tissue resistance to microbic action. Experiments of Metschnikoff also prove this action under certain circumstances.\*

Protective inoculation on this theory might either weaken the bacillary power to produce chemical products, thus making the normal resisting action of the cells more efficient, or the power of the cells might be directly stimulated by small doses of the poison. Koch thinks opinion is gradually moving away from this explanation, and coming around to the chemical explanation. But there is no reason why phagocytic action should not be regarded as involving a chemical process.

With regard to the bacteria-killing power of the blood, a great deal is to be said in its favor. Recently Behring and Kitasato in Koch's laboratory have given the positive demonstration of the protecting power of the blood, serum, exudations and extravasation fluid against tetanus and diphtheria, when these fluids are injected into animals. Protected mice bore twenty times the amount of the tetanus poison that would kill an unprotected animal. These animals were positively protected against both the bacilli and their chemical products. These are truly admirable investigations, of the greatest promise for the future. Fraenkel and Brieger also conducted investigations in diphtheria. They seem to have found two substances in the products of the activity of diphtherial poison, one which causes the poisonous effects, destroyed by a temperature of 55 to 60 degs., the other, which antagonizes the other and gives a certain protection. This latter resists temperature

\* See Mr. Lister's address on Antiseptic Surgery.



up to the boiling point. A temperature of 66 to 70 degs. will destroy the poison and preserve the protection. This substance confers immunity only against subcutaneous inoculation of diphtheria virus, and only after fourteen days. It has no therapeutic properties, indeed, when injected into animals already diphtheritic, it rather hastens death. This is a curious observation. Strange that Fraenkel refers to every investigator except Hankin, who isolated a substance which confers immunity against anthrax, working in the same laboratory where Frankel's investigations were made, Hankin's work, too, (*British Medical Journal*) being the most conclusive of all.

The principle of vaccination by chemical substances has been gradually working out since Pasteur originated the experiments. His first experiments were with chicken cholera, injecting a culture which had been deprived of organisms by filtration through porcelain. He thus demonstrated that the symptoms of the disease could be caused by the chemical product. This has since been shown of a number of disease germs.

Pasteur then found that he could, by introducing these chemical substances, little by little into animals, render them immune. Here was toleration gradually established. And this is Pasteur's view of immunity. It seems, too, perfectly logical, and it does not interfere with the chemical explanation. Indeed, chemical change alone can explain the toleration. When disease is produced this chemical change is quickly brought about; when immunity is conferred the change is gradually effected without disease symptoms, but produced all the same. We know that some remedies in large dose produce one effect and in small dose almost the opposite.

We know, too, that by giving very small doses of morphine and gradually increasing we can render people protected against the influence of ordinary lethal doses.

It is easy to lug in here again the phagocytic theory. Microbes in the body secrete substances which damage the cells and produce death. If these substances be introduced gradually, the cells become inured to the action of the poison; if, then, microbes be introduced in large quantity the cells resist their action because they have now acquired toleration;

that is, have had harmlessly produced, by repeated small doses, that chemical change, which, accomplished quickly by a large dose of the poison, would give rise to the symptoms of violent disease-action. In this connection, Lander Brunton mentions the curious instance of the salmon, which may live in either salt or fresh water. Take a salmon from fresh and put it directly into salt water or *vice versa*, and you kill him with certainty. But imitate his "migration" from the river out to sea by slowly changing the character of the water and he suffers no ill effects.

Sewill inoculated small quantities of snake poison, from time to time; tolerance was thus established for larger quantities; this tolerance, however, wore off in six months. This experiment resembles the tolerance to morphine, which gradually wears off.

Lander Brunton thinks it possible that the germs of a disease may establish in the cells of an organism the power to produce a substance inimical to the growth of the germ. Two substances would thus seem to be produced—one that produces the disease symptoms, and another that produces toleration. This statement of Lander Brunton, which I find in his Croonian lecture for 1889, corresponds with the discovery of Fraenkel, before referred to.

Another reflection forces itself upon me just here. The possibility seems indicated by the investigation of Pasteur, that environment and soil have much to do with the degree of virulence of the germ. The anthrax bacillus could never be attenuated until he studied temperature. No exposure would attenuate at 30 to 35 deg., but at 42 deg. it was accomplished with certainty.

Passing the bacilli through various animal sincreases or diminishes virulence. The disease called Rouget furnishes a singular example of the effect of the animal on the virulence of the virus. Passed through rabbits its virulence is steadily increased, while in pigs its virulence is as steadily diminished.

Viri then affect animals differently. The chemical products resulting under various circumstances may act variously.

As regards Koch's lymph, may it not be that its manufac-

ture in culture media produces some alteration that renders it more protective?

As to the nature of these vaccine substances there is much conjecture. The experiments of Brieger and Fraenkel are "based upon, if not the direct outcome of, Hankin's observations on the albumoses of anthrax, for although Brieger and Fraenkel spoke of the poisonous materials they have found, as tox-albumens, and Roux and Yersin of theirs as representing the diastatic ferments, there can be little doubt that those important poisonous materials that are likely to be of use in protecting the patient against the action of a microbe will have to be classed among the albumoses. We look upon this observation of Hankin's as having paved the way not only for the explanation of Roux and Yersin's experiments, but for the actual carrying out of Brieger and Fraenkel's experiments on typhoid, diphtheria and cholera." \* \* \*

"It must, however, be remembered that Wooldridge, Halliburton and Sydney Martin must share the credit of suggesting and working out what is at present known of these protean nitrogenous organic bodies."

"Even Koch's tubercle virus seems to depend," says the *British Medical Journal*, "upon substances closely allied to Hankin's albumoses."

Koch himself thinks his substance, although it is derived from albuminoids and closely allied with them, does not belong to the substances called tox-albumens for the reasons that the "paratoluid" bears high temperatures and dialyzes easily and quickly. Neither does it behave chemically like a ptomain, but it does resemble very closely, both chemically and in its physiological effect, the substance called albumoses.

But whatever the ultimate nature of the substance may be, one thing is certain, that a most valuable bacteriological highway of investigation has been opened up by this discovery of Koch's through the wilderness of disease, where hitherto we have only groped in ignorance, not knowing whither we tended.

In many respects tuberculosis differs from other infectious diseases like small-pox, measles or scarlet fever. These latter run a definite course and one attack protects against subsequent exposure, while tuberculosis is variable in its course and each



exacerbation seems to render the patients more prone to subsequent ones. But may we not reasonably hope that the *chemical product*, which can not multiply itself and thus form new foci of infection whenever introduced or let loose from previous foci, may, properly used, gradually confer immunity?

I believe tuberculosis to be a local disease at first, and that exacerbations are due to the absorption of the products of bacillary action upon the tissues of the foci of deposit, or to the inflammation attending the establishment of colonies elsewhere in the body.\* If this chemical product can, then, be injected in such quantities, and at such intervals, as will render the rest of the body immune, of course no further infection can occur.

If this be so, then tuberculosis need not be held to differ so markedly from other infectious diseases. Be this as it may, Koch has made, in my opinion, a most valuable discovery, destined, I firmly believe, to improve our knowledge of disease in general and to furnish us means of prophylaxis and cure for diseases like scarlet fever, yellow fever, diphtheria and even that dreaded disease cancer.\*

## PYORRHOEA OF THE ANTRUM. †

By A. G. FRIEDRICH, M. D.

A lady patient of mine sent me her servant, a girl of color, who related a story of long suffering, principally confined to the frontal region with a feeling of fullness upon the left side of the face, attended with a discharge of a very offensive nature through the nose. At the time of her visit, her trouble had very considerably subsided and the discharge through the nose become much less frequent than it had been for a week previous. She therefore concluded that she was on the road to recovery, and her coming to me was rather to care for her teeth than to take measures to relieve the condition from which she really suffered.

\* The bacillus of blue pus furnishes a product that will inhibit the action of the anthrax bacillus. Is it unreasonable to hope that such antagonists to the action of the disease germs may yet be discovered?

† Read before Orleans Parish Medical Society.

Upon looking into the mouth, I found several teeth very much decayed and advised their extraction, which was assented to. I thereupon removed the first and second bicuspid on the left side, which, to my surprise, was accompanied by a large discharge of pus through their sockets. This being a very unusual occurrence I advised her, as a matter of precaution, that should her condition not improve to call back again and I would look more thoroughly into her case. Two days later she came again, her trouble having in the meantime considerably increased. In examining the socket of the second bicuspid I discovered that the probe passed completely through and entered the antrum, indicating a case of *Pyorrhœa* or supuration of the antrum, which will furnish the subject for this evening's paper.

A description here of the antrum may not be out of place. The antrum was known since the days of Galen, but a comprehensive and comparatively accurate description of it was first given by Highmore, and consequently it is inseparably connected with his name. His treatise was called "*Disquisitio de Anatomia Corporis*," published at Hague in 1651. Highmore described the antrum as "somewhat conical and oblong, and that it is more frequently empty, but sometimes found filled with mucus, into which the humors of the head are able to distil by a certain meatus from the cavity into the frontal bone and from the ethmoid bone."

There is no such opening as here described. The only normal opening from the antrum is into the middle meatus of the nose. Ordinarily it is only a small, oblique aperture in front of the unciform process of the ethmoid and close behind the infundibulum. The opening is therefore at the upper part of and not near the floor of the antrum. Occasionally you may have a second opening a little behind and nearer the floor of the sinus. Mr. Catiline, after examination of 100 specimens, found that as a rule the antrum was larger in the male than in the female, and that it diminished in size in advanced age; that in the young subject the walls were thicker and the cavity comparatively smaller. Also, the adult antra varied in size from one capable of containing  $2\frac{1}{2}$  fluid ounces to one that could contain 8 drachms of

fluid, and that even the two antra in the same person varied in shape and size.

The roots of the first and second molars often, and the bicusps and canines occasionally, form prominences in the floor of the antrum, so that from whatever cause or causes these teeth become diseased, the thin plate of bone covering their fangs not unfrequently becomes affected and sets up the disease in the cavity. The roots of the first molars are sometimes found to be uncovered by bone and to project beneath the lining membrane of the antrum. So abscess of these teeth would produce a like trouble in this cavity. Abscess in the alveolæ, not bearing the same relations to this cavity, may burrow their way into the antrum. Magiston relates a case where the incisors and canines were the teeth affected. I have personally seen a case where the whole floor of the antrum was lost, resulting from an abscess of the central incisor. The pus on its way caused the loss of the lateral, canine and bicuspid on that side. When I saw the case, the disease was cured, but the opening into the antrum still remained.

The teeth are the most common cause, but other causes are known to produce this malady. Dr. Rees, records an example of a case in an infant, a fortnight old, a result of pressure during birth. This disease may also result from a catarrhal or other inflammation of the lining membrane, or the entrance of foreign bodies, either from within or without the mouth, or from syphilis.

The diagnosis of this disease is at times very simple and at others very obscure. The ordinary course is without any acute pain. The patient notices that he has a purulent discharge from the nose when blowing it, or that when he is lying down, the discharge finds its way into his throat. This may be overlooked, and he will complain of a disagreeable odor and taste in his mouth, with a tendency to nausea in the morning and spitting up of pellets of inspissated pus. It is rarely the case that the antrum ever becomes distended, for the natural opening into it, should it not be large enough, the thin wall will be readily absorbed, making it extremely rare that the antrum would become so distended with pus as to cause a prominence upon the cheek. I am aware some such cases



have been reported, but as we know that cysts readily develop in the antrum, occasioning this deformity, their contents becoming purulent, they might be mistaken for this disease. In exceptional cases, the pus not finding an exit distends the antrum, causing an absorption of the walls, thus both thrusting up the orbit and bulging out the cheek. Sir Wm. Ferguson reports such a case.

Under these circumstances the affection can be readily recognized by the peculiar cackling, which is perceived when the thin bone is pressed upon. Should the pus not be evacuated, it will very soon find its own way out, either through the cheek, floor of the orbit, or along-side of the tooth, and in any case will occasion considerable necrosis and leave an ugly scar.

Now, instead of this mild and quiet way which I have just described, this disease may be ushered in with considerable fever and constitutional disturbance. Dull, deep-seated pain, shooting up the face to the forehead, sometimes of the most intense and acute character, only subsiding with the formation of pus. The odor of the discharge is perceptible to the patient and not to his friends, which fact will assist you to make a differential diagnosis, as in a case of ozæma the reverse is the rule, the patient being in that case unconscious of his affliction. Besides, in a case of abscess, the blowing of the nose will, usually, cause a sudden discharge of pus, which may relieve all his symptoms for a moment.

The natural opening of this cavity not being in the most dependent part, there is always a residuum of pus which the patient can not get rid of.

The history of cases of this kind is usually as follows: The patient consults his physician and informs him of the discharge and disagreeable smell. His medical adviser, with a look that speaks wisdom, tells him he has a catarrh of the nose or, to speak more properly, "you have ozæma," and the nasal douche is brought into requisition and a preparation to snuff is ordered.

The name is all right; the douche and snuff not especially disagreeable; the only trouble is the case don't improve. The patient complains of a dull ache about the head, occasionally varied by being acute, and believes his teeth have something to

do with the trouble. Esculapius adds on to the douche and snuff an analgesic. The whole gamut is exhausted, from opium and its compounds to antipyrine, during which time the patient's stomach has not only been obliged to carry on an unequal war with the streptococci and staphylococci that have been swallowed in myriads, but also with our learned friend's prescriptions.

In the meantime, the patient always ailing, grows worse, cannot take food in the morning, and is finally reduced to a degree of prostration dangerous to life. Then follows a treatment for dyspepsia. Some one suggests that perhaps he ought to have his teeth attended to, and it often happens that the whole arch is sacrificed before the tooth, which has perforated the antrum, is extracted and the nature of his disease disclosed. This illustrates what may follow a failure to diagnose this malady, and I do not think it is in any way overdrawn.

Mr. J. Smith relates a case of permanent amaurosis by displacement of the eyeball. Also one of the same nature by Mr. Satter and others. Dr. Morse reports in the *Edinburgh Medical Journal* a case of a gentleman wherein a suppuration of the antrum was followed by death in sixteen days from suppuration within the cranium, with epileptic convulsions.

A word in regard to treatment. I would recommend the removal of all the teeth that may be implicated. This may be readily discovered by knocking upon them; the pain thus caused will betray the offending members. The most dependent part of the antrum is usually at the first molar. I would extract that tooth and perforate the antrum at that point unless I had opening sufficient without doing so and drainage was not interfered with.

In cases where the teeth are the causes of the trouble, simple extraction will generally suffice. In the case of the colored girl in question the opening left by the extraction of the bicuspid was enlarged, and after three injections with a 2 per mille solution of bichloride of mercury, all the symptoms disappeared. Where these cases become chronic, it will require a more vigorous treatment, and will generally succumb after the membrane has been stimulated into an active inflammation.

## PROCEEDINGS OF SOCIETIES.

GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE,  
MARYLAND.

## JANUARY MEETING.

The president, Dr. Henry M. Wilson, in the chair.

Dr. W. P. Chunn related an instance of apparent growth of the placenta after labor. The patient was 28 years old and had been married five years. She had had no children at full term, but had had three miscarriages. The first and second miscarriage occurred at about the fourth month of gestation. The last miscarriage occurred about May 10, 1890. She had missed one period, and believed herself to be about six weeks pregnant. On the 10th of May she began to have bearing-down pains and hemorrhage, with the expulsion of blood clots, lasting some three or four days. Then the pain subsided, the hemorrhage ceased and I regarded the uterus as empty. On the 12th of June, however, she was again seized with violent pains, and during the night was delivered of a placental mass larger than a man's fist, which I saw the next morning. The patient, as well as myself, was surprised. The fœtus was searched for, but no sign of it was found.

Dr. Thos. A. Ashby: I have seen a somewhat similar case. The patient began to have hemorrhages about the sixth week of gestation. She was not under my care at that time but I was called in four weeks subsequently, and she was then in the act of throwing off the fœtus. At the time of its removal the fœtus was apparently at the sixth or seventh week of gestation, and partly decomposed. The placenta was not affected by decomposition.

Before I saw her she had been going around bleeding from this cause and was not aware that she was about to abort. She had had five miscarriages between the sixth and eighth week in twenty-eight months, so she stated.

Dr. G. W. Miltenberger: I have known the whole ovum to be retained for months after the death of the fœtus. In a recent case the contents of the uterus were not thrown off till full term, though the fœtus was dead at the third month.

I can not understand the growth of the placenta in utero after the death of the child; but I can conceive of the growth of the placenta outside the uterus on account of the peculiar relation of the blood vessels.

Dr. L. E. Neale: I think it very unfortunate that the specimen is not presented.



The placenta is not developed at the sixth week of pregnancy.

The conditions in extra-uterine pregnancy are very different from those in intra-uterine pregnancy, and what is true of one regarding placental development is not true of the other.

I see nothing in the history of the case opposed to the belief that it was a very ordinary case of abortion (not miscarriage), with escape of the embryo, and more or less complete retention of the sac, chiefly chorion that might have been removed by the curette long before it was ultimately expelled.

Dr. L. E. Neale read a paper upon

#### THE INDICATIONS FOR CÆSAREAN SECTION..

This paper is intended to stimulate interest in and discussion of the subject of cæsarean section vs. craniotomy on the living child, upon which subject a series of papers will be presented by the members of the society. It refers particularly to the indications for the section, and is a plea for their operation.

If it serves to arouse interest in examining pelves or increase hesitancy in destroying children the labor is not in vain.

Craniotomy upon the living fœtus is believed justifiable, but only as a dire necessity, not as an elective procedure, and should not be resorted to where there is a reasonable probability of success by the section, and the uncoerced consent of the mother can be obtained.

No man is compelled to do craniotomy upon the living fœtus solely upon the choice of the patient or her friends.

In answer to the question, "What would you do if the patient were your wife, your sister or a near relative?" he believed practically this must be a matter for each man's conscience, over which no dogmatic rule of science can or should have sway.

If seen early enough the induction of premature labor at the thirty-second and thirty-fourth week by the method of Krause was a very strong antagonist to craniotomy upon the living fœtus. The range for this operation should not extend to a conjugata vera below  $2\frac{3}{4}$  inches (7 cm.) or to one above  $3\frac{1}{2}$  inches (8.75).

The indications for the conservative section included all insurmountable obstruction to the delivery of the living and viable child *per vias naturales*.

They include tumors, pelvic exudations, hypertrophic elongation of the cervix, cicatrices, stenoses, tetanus uteri, falciform uterine contractions, etc. He believed general opinion placed the limit for the absolute indication at a conjugata vera of  $1\frac{1}{2}$  inches or 3.75 cm., and the relative indication extended from

that point up to an undetermined conjugata vera measurement, and included many other conditions besides pelvic contractions. Other things being favorable a  $2\frac{1}{2}$  inch or 6.25 cm. conjugata vera (Harris), 3 inch, 75 cm. conjugata vera (Lusk), called for sections rather than craniotomy, but be warned against relying *entirely* upon pelvimetry in the relative indication.

In contracted pelves he preferred version to forceps when both were practicable. He insisted upon pelvimetry, and briefly outlined the methods. He believed it was chiefly by this means we could determine the indications for the section.

A conjugata vera of three inches—seventy-five cm., was generally admitted to be the least through which a living child of normal proportions could pass, and as Lusk maintained if other diameters were lessened or the contraction was not limited to the brim, it might require a conjugata vera of three and a half inches, eight cm., or more.

No hard and fast line could be given; each case must be judged alone. The relative size of the head, its resistance, the past history, the unreserved consent, the general condition and surroundings of the patient, etc., were all-important factors in the relative indication.

The life of the child was not “purely impersonal and scientific,” but eminently personal and practical, and he believed the mother should run a reasonable risk in its interest. The life saving of craniotomy could never be as great as that of cesarean section for it started with a necessary mortality of 50 per cent., or half the lives at stake. But aside from all argument and comparative statistics the section was decidedly restricting craniotomy. All deprecate the repeated performance of craniotomy on the same woman. He accepted Carl Braun’s rules for the relative indication.

Craniotomy was safer for the mother than section, but piecemeal extraction was equally, if not more, dangerous.

If conservative delivery *per vias naturales* had been attempted and failed, this was a strong point in favor of craniotomy and against the section under these increased dangers.

He strongly deprecated conservative tampering and then resorting to the section; many lives had been thus sacrificed. If we desire success we must make the section an elective operation and not a procedure of dire necessity.

Dr. Miltenberger: With regard to the paper of Dr. Neale’s, confined as it is to the indications for the cesarean section, there is nothing which I would controvert.

Under the absolute or positive indications, as laid down, there can be no question.

The confusion and discrepancy of opinion have arisen

from want of definiteness and clearness as to the relative indications.

If we take the statistics of craniotomy generally, including all cases, we get no positive resulting data to guide us.

Where the pelvis is so contracted as to necessitate the piecemeal extraction of the fœtus, it is recognized undoubtedly as the most serious of obstetric operations and more dangerous than cæsarean section.

Where, on the other hand, craniotomy alone is required, the operation is simple and the danger to the mother in proper hands, should not be greater than from the application of the forceps. In my individual experience on my own patients, I have been obliged to resort to craniotomy but twice in fifty years, and in these, as well as in those in consultation practice, the mothers have all recovered.

Now, it is just in this latter class that the doubt arises.

The smallest conjugata vera diameter through which a living child has been expelled is 3 inches, or, as has been claimed,  $2\frac{3}{4}$  inches, but with this we can not expect to save the child through the natural passages. But whether with this or a little more available space, we must recognize the prime and absolute importance, as the doctor states, of pelvimetry, and to its thorough practical study and application must we mainly look for increased certainty. Especially does this hold as to internal pelvimetry, the best instrument, by far, being the hand of the obstetrist.

Now, while it is true, the measure here of the conjugata vera by the finger may not be perfectly accurate, and we require also to learn the available space in the transverse diameter, yet with care it sufficiently approximates the truth for our purpose.

But on the other hand, as the doctor has said, we can not accurately determine the size of the child's head, its degree of ossification, etc. It is true by bi-mamæ examination we can approximate the truth, but not exactly obtain it. I have known an accomplished accoucheur persist for a length of time in the use of forceps, before he recognized that he was dealing with a hydrocephalic head. Thus both the factors have elements of uncertainty.

It is just in this class of cases that the doubt and uncertainty arises.

When the practical obstetrician meets with a case of dystocia, from this cause, by internal measurement he satisfies himself, as far as possible, he has three inches of available space in the conjugata vera, or even above this, without a full knowledge of the size of the fœtal head, he naturally applies the for-



ceps or proceeds to turn, and not improperly, but if he fails he has already violated the first fundamental law in *cæsareotomy* to resort at first to the knife without any previous operative manipulation; if such manipulation has been at all prolonged, the choice is not between *craniotomy* and *cæsarean* section, but between *craniotomy* and a *Porro*.

Fortunately pelves contracted to this extent are rare in this country, particularly in the higher walks of life.

The operation of *cæsareotomy* is in itself sufficiently simple, and the modern section is undoubtedly one of the greatest advances in modern obstetrics, while its success constitutes a brilliant epoch in our recent history. In the hands of those skilled in its technique, and taught and trained by experience, there is every reason to trust and believe that the modern *Saenger* will extend still further its successes, and that as an operator gains tact and knowledge with every case with which he deals, and as a part of his success must depend upon his absolute command of his patient and her surroundings, it is most likely the old picture will be reversed, and, with our septic and antiseptic precautions, hospitals will offer a smaller rate of mortality than private practice.

Fully realizing, as I do, the success of the modern *Saenger*, and the lessened mortality rate which has been achieved, yet we know that no abdominal section is entirely free from danger, and, as I said, in these cases of relative indication they may be claimed to be almost entirely void of peril with *craniotomy*.

I do not hesitate to declare that I should prefer on my own wife, as the safer for her, *craniotomy* to *cæsarean* section in such a case, and am therefore bound to extend to others, my patients, the golden rule "to do unto others as I would they should do unto me." I am therefore forced to the opinion, that *cæsarean* section will not completely supplant the old operation and that there still remains a field, although markedly limited, for *craniotomy* on the living child.

Dr. J. Whitridge Williams: I am sure that all of us are greatly indebted to Dr. Neale for the very clear manner in which he has set forth the indication for the operations, and I almost entirely agree with him.

The absolute indication I would place at 5 to 5½ cm. or 3 inches, and the upper line for the relative indication at 7½ cm., or 3 inches. Within these limits, unless the child be abnormally small, there should be no question as to the use of forceps; and the question to be decided is whether *craniotomy* or *cæsarean* section should be done.

Theoretically, I would choose the section in all cases that

appeared favorable; but, practically, I might waive my theory in the case of a primipara who had not been examined previous to labor; for in that case it might appear very hard to submit a young woman to such a risk without any previous intimation of her danger.

But if I performed craniotomy under these circumstances I would warn her that in becoming pregnant again she would take the responsibility of the child's life upon herself, and that I would refuse to perforate in subsequent pregnancies.

The mortality of the operation need not dismay us, for Munchmeyer has lately reported the latest statistics of Leopold, in which he reports twenty-eight Saenger operations with the loss of three mothers and one child, and seven Porro operations with no maternal deaths.

Dr. B. B. Browne: I had a case recently upon which I did *cæsarean* section. The woman was 27 years of age. She had had one child. Her labor was two years ago when she had convulsions and a craniotomy was done. As a result of injury received, at this time, the vagina and uterus sloughed, and there was complete atresia of the vagina. This atresia was afterward opened up and she became pregnant. The vagina was contracted by cicatricial bands, and an opening could be felt in the side of the cervix, but to the left of the opening was a cup-shaped cavity which might have been the old cervix.

She was not sure of the time of impregnation. She was swollen and her urine solidified with albumen upon heating. Labor pains began December 20, and continued for one or two days, but there was no dilatation. She came to the hospital December 22. She had severe uterine contractions that day, and came for the purpose of having *cæsarean* section done. But next day the pains had all gone. The night of January 1, the water broke, and severe pains began. The cicatricial bands about the cervix were cut and Elliot's forceps were introduced. Both blades of Tarnier's forceps could not be gotten on. After severe efforts I concluded that she could not be delivered in that way.

In the morning the foetal heart was distinct; in the afternoon it was feeble.

The section was made without difficulty. The placenta was attached in front. The child could not be resuscitated. The placenta was readily detached, and the uterus was cleaned out and closed by the Saenger method.

The operation was done on Friday, and the patient did well until the following Tuesday, when she sank rapidly, and died in a few hours.

The woman had grave kidney disease, and had little chance of recovery on that account.

In this case several things are to be considered:

1. The woman was perfectly willing for the operation.
2. Her life, from the condition of her kidneys, was not insurable, and the child had a good chance of living.
3. She had had much difficulty in the former craniotomy and barely escaped with her life.

Dr. Ashby: I have had the good fortune to witness two cæsarean sections—one, the case of Dr. J. G. Jay, of this city, several years ago, and the recent case reported by Dr. Browne. I was impressed with the ease with which the operation can be done. Its mechanical execution is certainly much less difficult than that necessitated by many intra-abdominal operations.

Hemorrhage is easily controlled, and the closure of the uterine wound is not a difficult undertaking.

In the case of Dr. Jay, the mother made a prompt recovery, and the child perished simply because of the unavoidable delay which was experienced before an attempt at its removal was made. Its death had, in my opinion, no relation to the operation, but to causes which antedated the section. I am convinced, in the case of Dr. Browne, the child could have been saved had no other method of delivery been attempted.

The section, I think, bore no relation to its death. In this case the operation was skilfully done, and I am inclined to believe that the mother's death should be assigned chiefly to her kidney complications. She was a bad subject, but bore the section well.

My opinion of the cæsarean section is altogether favorable. It has come to stay, and with an improved technique and larger experience will be approached with less hesitation.

The operation of the future will be approached without delay, and before other methods of delivery have been employed.

The important indication for the operation rests upon careful pelvic measurements and determination in advance of any obstetric interference of the impossibility of delivery by version or forceps. If this is done section will be approached under its most favorable aspects and its results will be far more satisfactory.

I agree with Dr. Miltenberger in that, personally, I would prefer craniotomy, if the patient were a member of my own family, but upon scientific grounds, I would not hesitate to operate did my patient and her friends elect this procedure, having satisfied my own mind that a living child could not be born in any other way.



I think it unfortunate that the physician in charge of these cases should not have the moral support of the public and profession in the selection of the section in advance of attempts at other methods of delivery. Out of deference to a sentiment, he often feels forced to use the forceps and version where his own judgment was in favor of the section.

Valuable time is thus lost, and the lives of both mother and child endangered, if not sacrificed.

Dr. Neale: As no points were raised against the paper I have nothing to say in its defence. I did examine Dr. Browne's case, and told him in my opinion it was no case for the section. The chief obstruction was in the soft parts—that in the pelvis was very slight, if any. I thought it possible to deliver the child alive *per vias naturales*, but was sure it could be readily extracted after craniotomy. Owing to the kidney complication the mother was in most unfavorable condition for the section, and, for that matter the child also; therefore, I advised against this operation.

However, after once beginning a conservative delivery, *per vias naturales*, which was persisted in too long (thirty minutes), I certainly never should have resorted to the section in that case with both child and mother in the then most unfavorable condition, but would have delivered at once by craniotomy. I totally and emphatically differ from Dr. Ashby that any conscientious obstetrician should ever be forced to resort to craniotomy by the moral suasion of the patient or her friends. Such teaching would be extremely pernicious.

The sentimental question of what one should do if the patient were his wife, etc., is a matter of individual conscience, and not open to scientific discussion before a medical society.

I again request the fellows not to let this matter rest where we leave it to-night.

I wish to emphasize the fact that I have purposely avoided any reference to the religious aspect of this question, as I do not believe this point is open for scientific discussion before a medical society.

WILLIAM S. GARDNER.

## THE TREATMENT OF ACUTE ANEMIA BY INFUSION.

By BAYARD HOLMES, M. D., Chicago, Illinois.\*

Like many other therapeutic procedures, transfusion of blood goes back to the alchemists for its origin. It was first proposed and practised as a rejuvenating measure, and the blood of children was introduced into the viens of the decrepit

\* Read before the Chicago Gynecological Society, November 21, 1890.

and infirm. To-day there is a glamour of romanticism about blood transfusion\* which would render it popular but for the dreadful accidents which have frequently attended its use.

The recent advance in surgical treatment removes entirely all danger of sepsis, which long deterred operators from this procedure. Transfusion has been proposed for acute traumatic anemia, for hydremia, for pernicious anemia and chlorosis, for malignant infectious diseases and sepsis, and for exhaustion due to prolonged suppuration, phthisis, and old age. In this essay I shall confine my attention to the treatment of acute anemia.

Death from hemorrhage is due to anemia of the brain. Fatal anemia may either quantitative or qualitative. When the rapid loss of blood in a healthy person exceeds a certain limit, the circulatory mechanism is collapsed, the auricles are imperfectly filled, the ventricles, at the beginning of the systole, almost empty, and a stasis in the capillary system results. Thus the brain is anemic and its functions arrested. If the hemorrhage is stopped a little short of the danger point, the capillaries are filled with lymph from the connective tissue spaces. The quantity of the lymph circulation is estimated to be about equal to the circulating blood. The intercellular lymph spaces act as a storehouse for the lymph, and it easily and rapidly passes into the ubiquitous capillaries when they are depleted. Indeed, McAllister (page 75) remarks: "It would be genetically more accurate...to call blood intravascular lymph in which are contained red corpuscles. Lymph may be regarded as the primary nutrient fluid, and blood as lymph plus a respiratory provision in the form of non-nucleated corpuscles, for the conveyance of oxygen to the tissues."

The cerebral anemia may be due, not to the diminished quantity, but to the perverted quality of the blood. Such instances are to be observed in those diseases in which the function of the hematopoietic apparatus is interfered with.

The quantity of blood in the body has been made the subject of careful study by physiologists. It is estimated variously, but it will be sufficiently accurate for our purpose to assume that it is one-twelfth the weight of the body. Of this mass one-eighth is in the arteries, one-half in the veins, and the remaining three-eighths in the capillaries.

The experiment of Rosenberg† would indicate that animals can survive the rapid loss of two-fifths the total quantity of their blood, while the loss of more than two-fifths and less

\* Ewald has recommended the restriction of the term "transfusion of blood" to the classical operation, and would apply the term "infusion" to the injection of watery solutions, while the operations of Ziemssen he would call "injection of blood" (*Bluttransfusion*, *Wasserinfusion* *Blutinjektion*). These terms, however, are not yet adopted by English writers.

† *Virch. Arch.*, Bd. 112, S. 464.

than one-half is usually, and more than one-half absolutely, fatal. In his experimental use of the 7 per cent. salt solution, he was led to think that the injections only temporarily prolonged life in hemorrhages beyond one-half the total quantity of the blood. This he believed was due to the reduction of the absolute number of corpuscles in a given bulk, resulting in a qualitative anemia.

There is evidently a point, then, beyond which the proportions of corpuscular elements of the blood may not be diminished, as well as a point beyond which its quantity may not be reduced. It is not probable that this point can be determined by counting the corpuscles in progressive anemia, for doubtless a much smaller reduction in the corpuscular elements would result fatally when rapidly induced. If we take Rosenberg's data, and assume that a loss of one-half the blood is ultimately fatal, even if infusion and resuscitation is practised, we should have a reduction of the corpuscular elements to one-half a fatal reduction. As there are ordinarily 5,000,000 corpuscles in a cubic millimetre of blood, a loss of one-half the blood, and a restoration by infusion of its bulk to the full amount, would reduce the number of corpuscles to 2,500,000. This number has been found clinically to be compatible with life and a fair degree of vitality. Patients recover with a presence for months of less than 2,000,000 corpuscles per cubic millimetre. But a reduction of the number of corpuscles beyond 1,500,000 is usually rapidly fatal, and death occurs before the number falls below a million to the cubic millimetre.

We should say, then, that patients do not survive the loss of more than one-half, or some such proportion, of the corpuscular elements, though it is evidently impossible to fix the proportion exactly. Mikulicz has lately (1890) examined the blood of patients who have suffered from hemorrhage, and he concludes that a loss of 5 per cent. of the coloring matter—*i. e.*, 5 per cent. of the corpuscular elements—is restored in about five days, and that a proportionate time is required for more extensive hemorrhages.

It may be assumed that conditions of acute anemia may occur in which the natural dilution of the blood with lymph is sufficient to resuscitate the patient: and it is probable that such an equalization of the lymph and blood pressure is adequate up to the loss of about two-fifths the total quantity of the blood mass. When more than two-fifths and less than one-half the blood is lost to the circulation, dilution of the lymph by transfusion of neutral salt solution is sufficient to restore the patient to a living equilibrium. But there is a point



beyond which the dilution of the blood, either directly or through the dilution of the lymph, will not restore the patient; for, though the increase in the quantity of the inter-vascular circulation by washing out the lymph with the neutral salt solution meets the mechanical needs of the circulation, it so far reduces the respiratory qualities—the oxygenating properties of the blood—that a qualitative anemia, incompatible with life, persists.

Looking at the loss of blood as the cause of death in a number of obstetrical and surgical cases, as well as in accidents, and as the cause of a protracted convalescence when short of the fatal point, we may well consider the indications for treatment in acute anemia.

One-half the volume of the circulating blood is found in the collapsible veins. It is evident that they will be the first to be emptied in extensive hemorrhage. By placing an anemic patient in the vertical position, with the head down, the blood vessels throughout the three vital parts, the brain, the heart and the lungs, will be fully distended with the least amount of blood. The first indication, then, in severe acute anemia is to fill the blood vessels by maintaining the most favorable position of the body of the patient. The same result may be more tardily, though more conveniently, attained by temporarily shutting off from the circulation the larger extremities by means of elastic bandages applied firmly from the distal to the proximal extremity of the limb. These two procedures are sometimes termed auto-transfusion.

When the anemia is so excessive that auto-transfusion is inadequate to restore the mechanical necessities of the circulation, the anemia is fatal. But it may temporarily restore the function of the respiration and yet fail to meet the subsequent needs of life. Then there is but one source of relief. This is to be found in the lymph. The rapidity with which the blood pressure is raised is remarkable. It is usually complete at the end of an hour and a half or two hours. Therefore, when the symptoms of a low blood pressure remain after an hour and a half or two hours from the beginning of hemorrhage, and the mechanical necessities of the circulation are unmet, the washing out of the remaining lymph by means of a subcutaneous infusion of a neutral salt solution meets the indications of the case.

The amount of salt solution, as well as its concentration, is a matter of some moment. The proportions need not be so exact nor the temperature so well regulated as in infusion directly into a vein, for the tissues act as a sort of ballast, and reduce the infusion to a proper concentration and temperature.

They retain, also, any excess in the quantity of the infusion until the blood pressure is reduced again by excretion. Large amounts have been used without danger, but in excessive anemia the quality of the blood may be carried to a fatal point of dilution in raising the intravascular pressure beyond the mechanical necessities of the circulation. Practically this is not likely to happen, for an excess would mean the infusion of more than a gallon.

After the mechanical needs of the circulation are restored, the quality of the blood may be so impaired that a vital equilibrium is not to be attained, and the patient sinks into a state of rapid dissolution. The oxygen-carrying and the nutritive needs of the circulation are not met when the mechanical requirements of the heart are satisfied. The vital power of the heart muscle (and doubtless of every part of the body) is sufficient, as Martin, of Baltimore, has shown, to keep up its function for several hours without any nutrition at all, but it eventually becomes exhausted.

For such severe anemia the infusion of a salt solution and the dilution of the lymph is not enough. The indications have been pointed out again and again; but the dangers of direct transfusion of blood are so many and so formidable that they have deterred the experienced from its practice. The desired result has been sought, then, in the transfusion or injection of defibrinated blood.

Münchmeyer\* has well stated the advantages of infusion of 0.6-per-cent salt solution. They are too familiar to need rehearsing. Every one will appreciate the accessibility of the solution as compared with that of other materials, such as blood and defibrinated blood. Its composition does not require a high degree of accuracy. Its administration does not require an assistant or an anæsthetic. Any simple apparatus may be used—*e. g.*, an aspirator, syringe or a tube and funnel, and, best of all, the rotary surgical pump.

My own experience in the treatment of acute anemia has been confined to auto-infusion, and on two occasions to the subcutaneous infusion of neutral salt solution. The transfusion is done with an apparatus consisting of a bottle holding one gallon, or four litres nearly. In it is dissolved one of these packages of salt, just twenty-four grammes, or six drachms. It is stopped with cotton and boiled for three hours. In an emergency such a bottle may be filled with boiling water, and the salt added and used immediately; a rotary surgical pump is used to inject the liquid. The small gum tube is mounted at one end with an inspirator needle; the other end

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\* Arch. f. Gyn., 1889, Bd. 34, p. 481.

dips into a glass. It may be retained by slipping on a little glass tube. When the glass is filled from the bottle, a few turns fill the tube completely with the solution and empty it of air. The temperature is regulated by allowing a coil of the tube to lie in the basin of water near the patient. This simple apparatus has the advantage of supplying a continuous stream, with no danger of getting out of order and no fear of air. It is easily and rapidly arranged

\*W. Hunter has shown that the intraperitoneal injection of blood is followed by transudation *from* the vascular apparatus into the injected foreign blood, and by *diminution* of the quantity of circulating blood with consequent concentration. The number of corpuscles to the cubic millimetre increases from 7 to 35 per cent. in a few hours, and as quickly returns to nearly normal.

It is possible that in this case some of the intensity of the anemia was due to the secondary transudation into the hematoma and the consequent concentration of the blood left in the veins. As Hunter found that the intraperitoneal blood was found in the increased number of corpuscles in the circulation for weeks, the remarkably good effect of this infusion might have been due to the subsequent absorption of the blood in the hematoma.

This incident may point to the combination of 0.6 per cent. salt infusion with the subsequent infusion of blood. The pressing mechanical indications are met by the infusion, and the absorption of the injected blood restores the vital qualitative equilibrium of the circulation. From reading the literature on this subject, I would propose the following aphorisms:

1. In dangerous acute anemia auto-transfusion should first be practised.

2. When the lymph spaces are drained, as is indicated by the sunken and drawn appearance of the face, or by the time auto-transfusion has been tried and the symptoms of anemia persist, infusion of a large amount of 0.6 per cent. salt solution should be practised. The necessary apparatus is so simple and the danger so remote that this measure should not be neglected.

3. The immediate intravascular injection of salt solution or blood for acute anemia can not be countenanced in the present state of our experience and knowledge.

4. The value of secondary subcutaneous or intraperitoneal injection of blood in cases of so extensive hemorrhage that a qualitative anemia is present after the mechanical needs of the circulation are satisfied, is still conjecture, but certainly such

\*"Intraperitoneal Blood Transfusion," Journal of Anatomy, Vol. XXI, 1887, and British Medical Journal, 1890.



injection of blood should not be practised until reaction is well restored.

5. The immediate subcutaneous injection of blood diluted with a large amount of salt solution is not contra-indicated, but its value is still problematical.

6. The rotary surgical pump is the most perfect and manageable apparatus yet proposed for subcutaneous infusions and injections of large amounts. and for direct intravascular transfusion.

Dr. Parker: I should ask what effect Dr. Holmes found was produced by the introduction of a quart of this solution in the back—I mean locally, the amount of distention? I know personally of two instances in which this method was adopted, apparently with perfect relief. One I saw practised by Prof. Schede in a young fellow about 16 years of age, upon whom he had previously done an operation on the lower end of the femur, and some two weeks after this operation the young fellow was taken, the wound unhealed, with a severe and profuse hemorrhage, and nearly bled to death. He was brought to the hospital one afternoon, and Prof. Schede injected this solution of salt—one teaspoonful of salt to a pint of water—into the boy's body, with apparent restoration of vitality; at least his pulse was perceptible afterward and his general appearance much better, so that Prof. Schede went on and secured the vessels in the popliteal space.

In another operation, by Prof. Leopold, he transfused a solution of a teaspoonful of salt to a quart of water two days previous to doing an abdominal hysterectomy for a bleeding fibroid; the woman had bled so badly that she was practically exsanguinated. Apparently the hysterectomy was done without any more effect upon the patient than the operation would have caused under ordinary circumstances.

I have also seen two cases in which there has been direct transfusion of defibrinated blood, with a very small apparatus, in which the effect was that of restoration or restitution of the patient from the effects of profuse hemorrhage. In both these instances the direct transfusion of blood was made with the ordinary black hard-rubber ounce syringe. The opening was made directly into the vein and the blood injected into it; four syringe-fuls only were introduced in each case.

Dr. F. H. Martin: Mr. President, I would like to express my admiration of this little machine. I must confess that when I telephoned Dr. Holmes, asking him if he could perform transfusion, and he very positively said he could, and that he had the apparatus, I was delighted. I was very much surprised, when he came to the operation, to find that the whole apparatus was contained in this little box. I expected

Dr. Holmes would come with a sheep or a negro, or something of that kind, from which blood would have to be drawn and defibrinated, etc. This, however, accomplished the end with astonishing quietness during the operation, without any fuss or turmoil at all, and it certainly had a wonderful result in reviving the patient.

The President: The apparatus is substantially the one employed by Münchmeyer, minus the Allen pump. One theoretical objection to this method has been advanced by Prof. Schäfer. From his experiments on dogs he has demonstrated that in many cases death from hemorrhage is due, not so much to loss of fluid as to loss of corpuscles. In these cases the injection of a physiological salt solution will probably accomplish no great good. I saw Dr. Holmes transfuse in the case of extra-uterine pregnancy. The hemorrhage was into the sac behind the peritoneum, and due to the detachment of the extra-uterine placenta. The woman was pulseless, pallid, and you could scarcely hear the heart beat by applying the ear over the precardium. Her skin was leaky, and she was in the most profound condition of collapse, shock, and hemorrhage I have ever seen an individual in and still survive.

The transfusion was made in the subcutaneous tissue about the lower angles of the scapula and over the small of the back. I rubbed the salt solution in as Dr. Holmes injected, and the fluid was very easily dispersed throughout the connective tissues, and without apparent local reaction. We did get a little emphysema over the loins, but that was due to the insertion of the needle, for which I was accountable. The effect in that case seemed to me to be magical; within six hours after the injection the pulse came up, and the next morning the woman got out of bed and walked around the room. In addition to this, however, Dr. Mattison injected a quantity of peptonized milk into the rectum. Either as the result of the salt solution, or the enemata, or the wonderful tenacity of life that some Germans in particular seem to manifest, or of all three factors, that woman recovered.

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Doctor Benjamin Lee, secretary of the State Board of Health of Pennsylvania, has accepted the position of secretary of the Section on State Medicine of the American Medical Association.

As the meeting takes place in Washington, May 5, it is important that all papers intended for this section should be in his hands by the fifth of April. All members of the association desiring to be enrolled in the section are requested to forward him their names at 1532 Pine street, Philadelphia.

## HOSPITAL REPORTS AND CLINICAL NOTES.

## CASES TREATED BY KOCH'S METHOD AT THE CITY, EYE, EAR, NOSE AND THROAT FREE HOSPITAL, OF NEW ORLEANS.

Commission: DRs. A. W. DeRoaldes, R. Matas and P. E. Archinard.

## HISTORY OF JOHN FERRAN.

*January 12, 1891.*—John Ferran, *æt.* 14 years. Born in New Orleans. No history of cough, hemoptysis, fever or night-sweats. Good appetite. Patient feels strong enough and is not very anæmic. Patient was stouter than he is now. He attributes the emaciation to chills and fever which he contracted in a swampy region.

*Physical Examination of Lungs.*

Inspection—Ant. surface: Right side more flat than left.

Post surface: Left scapular moves more than right.

Palpation—Ant. surface: Apex of right. Increased vocal fremitus.

Percussion—Slight dulness at middle of chest, in axillary line.

Auscultation—Ant. surface: Vesicular murmur not as loud at right apex as at left. Vocal resonance increased at right apex.

Diminished vesicular murmur at middle of right lung.

Post surface: Diminished vesicular breathing at apex of right lung; prolonged expiration at same point. Diminished vesicular breathing and prolonged expiration at middle of right lung.

Heart—No murmurs at any point.

Weight, eighty-two pounds. Temperature  $98\frac{3}{4}$ .

Pulse 88, full, not compressible, good.

Respirations 20.

His father, mother, sister, and two brothers died of phthisis. He has a brother, age 18, who is suffering from advanced phthisis.

From this boy's family history it will be seen that he was an excellent subject in which to test the value of Koch's fluid as a detector of latent tubercular diseases.

John received injections as follows, since the last report:

|                  |                |
|------------------|----------------|
| January 22.....  | 10 milligrams. |
| January 27.....  | 10 milligrams. |
| February 11..... | 2½ milligrams. |

A reference to the temperature chart shows that he reacted very strongly in the beginning; now, the liquid has no effect; his system seems to have become accustomed to it.



## HISTORY OF VINCENT POLITZ.

*January 12, 1891.*—Vincent Politz, æt. 34. Born in Palermo, Italy. Father died of some trouble unknown to patient. Mother was drowned. She was stout and healthy at time of death. Has two brothers, who are living and perfectly healthy. Had one sister, who was drowned when 39 years of age. She was very healthy at time of death. Patient has two children. One is perfectly well and the other has tubercular synoritis of left knee for which he is now being treated at the Infirmary. See Joseph Politz. Patient was perfectly well until eight months ago, when he began coughing. He continued to cough until three weeks ago. Since then the cough is subsiding. He is taking cod liver oil and some syrup for the past three weeks. Patient feels strong enough to work, but was advised by his physician to abstain therefrom. Patient's wife thinks he has not lost much flesh, but he thinks he has. He sleeps well, does not cough or expectorate at night, and never has night sweats or fever. No history of hemoptysis.

*Physical Examination of Lungs.*

Inspection—Ant. surface: Right side more flat than left. Left side moves more than right.

Post. surface: Left scapular moves more than right.

Palpation—Ant. surface: Vocal fremitus increased on right side.

Post. surface: Vocal fremitus increased at right apex.

Percussion—Ant. surface: Slight dullness at apex.

Post. surface—Slight dullness at right apex and level of spine of scapular.

Auscultation—Ant. surface: Apex of right. Indistinct breathing; sub-crepitant râles; prolonged expiration; increased vocal resonance.

Middle of right: Diminished vesicular murmur; sub-crepitant râles.

Post. surface: Apex of right. Diminished vesicular murmur; sub-crepitant râles.

Post. surface: Apex of right. Diminished vesicular murmur; sub-crepitant râles; increased vocal resonance.

Heart: No hypertrophy. No murmurs.

Weights 116 1-2 pounds. Temperature normal. Pulse, 98, flabby, compressible, but full enough.

Respirations, 24.

## HISTORY OF EDWARD WIRTH.

*December 27, 1890.*—Edward Wirth, born in Kentucky, æt., 36; occupation, saddler. Father is 77 years of age and

is still living. Mother died in 1875 of "liver complaint." Has one brother and two sisters, who are living now and are perfectly healthy. Patient is of temperate habits; would get on sprees occasionally. Single man. Never had any venereal disease. Was perfectly well until 31st of December, 1879. On that day he had three hemorrhages. The blood seemed to be expelled from the mouth in a way similar to vomiting and was coughed up also. Patient was drunk at the time of the occurrence of the hemorrhages. From 1879 to 1885 no hemorrhages occurred. In the latter year patient had seven or eight hemorrhages in the course of two weeks, which he arrested by taking salt and vinegar. The hemorrhages spoken of above were not very profuse. In 1888 patient coughed up blood every day for three weeks, one hemorrhage being very profuse, lasting one hour. Slight hemorrhage in 1889, and in 1890 spitting of a little blood occasionally. Never had a continual cough; would cough a little after meals and on rising in the morning. From 1885 to 1888 had occasional night sweats, which wore off in the latter year. Since 1888 he recollects having sweat but a very few times during the night; so far as to go on almost unnoticed. In Chicago, in 1888, patient's temperature was taken three times daily; it ranged between 99 and 101 and would sometimes go up to 104. Patient at one time weighed as much as 150 pounds. He never weighed more than 150 pounds, and at present weighs 116 pounds. He recollects a time when he weighed 105 pounds only, having a chronic diarrhœa then besides his present trouble. Patient had a diarrhœa from 1886 to two weeks ago, accompanied with mucus, but no blood; the highest number of passages in one day being 15, the lowest 3. At present he has no diarrhœa, but is taking

|                           |      |
|---------------------------|------|
| ℞ Bismuth S. N. ....      | ℥vi. |
| Tinct. Catechu .....      | ℥i.  |
| Tinct. Cinnamoni .....    | ℥iv. |
| Syr. Simp. q. s. ad. .... | ℥iv. |

M. S. Tablespoonful 3 to 4 times a day.

And also

|                    |           |
|--------------------|-----------|
| ℞ Argent Nit ..... | gr. vi.   |
| Pulv. Opii .....   | gr. xii.  |
| Mft. Cap .....     | No. xxiv. |

Sig. One capsule 3 or 4 times a day.

Patient feels stronger now than he has felt for two months. He has been working on trains, as brakeman, for the past three years. Appetite is tolerably good now.

### *Physical Examination of Lungs.*

Inspection—Ant. surface: Supra and infra clavicular depressions rather well marked on both sides. Movement of chest diminished on left side.

Post. surface: Spine curved slightly to left side. Right scapula moves more than left.

Axillary line: Bulging of left side.

Percussion—Ant. surface: Slight pain on percussion at a point three inches above and one inch to right of right nipple. Rather sharp pain by percussing over left nipple.

Post. surface: Dullness at left apex.

Auscultation—Post. surface: Broncho-vesicular breathing at apex of right; very much prolonged expiration at same point.

Respiratory murmur remote at apex of left; expiration prolonged, and vocal resonance increased at same point.

Harsh breathing and prolonged expiration on deep breathing, at level of spine of scapula of left side.

Respiratory murmur very remote at level of inf. angle of scapula of left side.

Increased vesicular breathing at base of right lung.

Respiratory murmur absent during tranquil breathing; slightly audible during deep breathing, and vocal resonance increased, at base of left lung.

Ant. surface: Increased vesicular breathing at apex of right.

Harsh breathing, slightly prolonged expiration, and slightly increased vocal resonance, at apex of left.

Increased vesicular breathing at level of fourth rib of right side.

Very remote respiratory murmur at fourth rib of left side.

Very remote respiratory murmur, amounting almost to absence, in axillary line of left side, from apex to base.

Heart: No hypertrophy and no murmurs at any point. It intermits irregularly.

Partial aphonia began with soreness of throat, especially on swallowing.

Examination of larynx, with laryngoscope: Extensive ulceration of both vocal cords; swelling of arytenoids, especially on right side; congestion of epiglottis and base of tongue.

This was the only good case of tubercular laryngitis that could be found. Another case was seen in the clinic, but the accompanying pulmonary lesion was so far advanced that it was deemed advisable not to use the liquid.

Since the injections mentioned in the last report, Wirth has received the following:

|                   |               |
|-------------------|---------------|
| January 27.....   | 2 centigrams. |
| February 11 ..... | 5 milligrams. |

On June 25, his bowels moved four times. January 28,



he felt general malaise and pain in all his joints. He felt worse after this injection than after any previous ones. Bowels moved six times.

February 1, throat very painful; voice not as clear as it has been.

February 5, vomited; bowels still loose.

February 11, pain in the back and occiput.

February 12, laryngoscopic examination: pyriform swelling not diminished. Surface of cords rough and grayish, and mucous membrane below right vocal cord swollen and narrowing the lumen of the trachea.

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#### TUBERCULAR SYNOVITIS OF KNEE.

The child, Joe P., aged 5, born in New Orleans, is the son of V. P., who is at present under treatment for pulmonary tuberculosis (see page 704). Six months ago the child fell and injured the left knee slightly. The accident was not regarded as serious by the parents, and no professional advice was sought, but the child limped from that day. The knee began to swell gradually and became painful. When the little patient was first seen by Dr. Matas, five months after the accident, the knee had swelled very markedly, and the atrophy of the limb was beginning.

The synovial supra-patellar bursæ were very apparently distended by a thick, plastic exudate; the synovial sac thickened but not excessively; the patella was fixed and immovable, apparently imbedded in a mass of fibro-plastic material. Manipulation of the joint not very painful; pain marked, however, on excessive flexion or extension; no pus.

There was hardly any constitutional disturbance. The child did not eat as well in the last few weeks as before, and was not gaining flesh. The diagnosis of tubercular plastic synovitis was made by Dr. Matas.

For fifteen days prior to admission the child had been treated with the usual constitutional remedies, viz: cod liver oil; syr. ferr. iod., hypophosphites and arsenic. The limb had also been encased in a liquid glass bandage which secured complete rest for the joint.

When admitted in the infirmary for the application of Koch's treatment, the child's general condition appeared to have improved slightly, and the swelling of the knee had also apparently diminished a little. On January 14, before the first injection, the circumference of the diseased limb above the patella was  $8\frac{1}{2}$  inches; across the patella, 9 inches; below

patella, 7 inches. The normal limb measured, above the patella,  $7\frac{1}{2}$  inches; across (over) the patella, 8 inches; below the patella, 7 inches.

The temperature of the patient was carefully taken every two hours during the first twenty-four hours after admission, and it was normal, as shown by chart No. 4, published in the last issue of the JOURNAL. A careful general examination was also made by the committee, and no disease of the internal organs or, in fact, of any other part of the body except the left knee was detected.

The urine was tested and found normal.

On January 15, 10 A. M.,  $\frac{1}{2}$  milligram injected.

On January 16, 9 A. M., 1 milligram.

On January 17, 10:05, A. M.,  $1\frac{1}{2}$  milligrams.

On January 18, 9:14 A. M., 5 milligrams.

On January 22, 10 A. M., 5 milligrams.

February 11, 10 A. M., 1 milligram.

February 18, 10 A. M., 1 milligram.

February 22, 10 A. M., 1 milligram.

Therefore, since the first injection, January 15 to February 22, a period covering thirty-seven days, this little patient has received a total quantity of Koch's original fluid amounting to 16 milligrams.

The patient remained in the infirmary from May 14 to February 22, during which time he was most carefully watched, and observations on temperature, pulse and respiration taken punctually and faithfully every two hours by the trained nurse, Miss Butler, and the immediate indications met skilfully by Mr. Chas. Landfried, M. S., in charge. It will be noticed, by examining the chart, that the temperature reaction which was regarded as characteristic by Koch in his original communication was not markedly displayed until the fourth injection of 5 milligrams (which was omitted, by inadvertence, in the chart). It was noticed that about seven hours after the injection of this quantity, the temperature rose to nearly 104 F. and the other evidences of constitutional disturbance, as shown by the exceeding rapidity of the pulse (168) and respirations (nearly 50 per minute) became alarming and had to be attacked by antipyretics (antifebrin) and stimulants. It should also be noticed that while the temperature reactions were slight after the injection of  $\frac{1}{2}$ , 1 and  $1\frac{1}{2}$  milligrams, the pulse reaction was even under these doses excessive, the pulse rising to 140 per minute, while the temperature was sub-normal,  $97\frac{1}{8}^{\circ}$  F.

It should also be noted that even after the complete defervescence of the first great heat wave following each in-

jection of 5 milligrams, the thermal equilibrium was disturbed during the three succeeding days, the temperature oscillating each day between a super-normal point,  $100^{\circ}$ , and descending to the sub-normal  $97^{\circ}$  and even  $96^{\circ}$ , thus showing that the typical pyrexia produced by Koch's fluid does not end in a single critical defervescence, but in a series of lesser ripples until the equilibrium is gradually restored, a point that confirms the observations of other investigators.

In this case the most striking clinical phenomenon elicited from the standpoint of the constitutional reaction was the markedly depressing, in fact, dangerous and alarming, effect upon the pulse, which was not only enormously increased in frequency, but was likewise effected in character, becoming shallow and compressible. The respiration, also, became rapid and the rhythm was altered at times to a distressing degree.

The local phenomena which followed each injection of 5 milligrams were perhaps not as marked as the constitutional reaction, but were nevertheless very pronounced, and were of special value as they occurred in a child (in which the psychical element is reduced to a minimum). With the progressive rise of temperature following the injection, the child began to complain of pain in the affected knee, the pain increasing to such a degree that the patient would not allow the slightest touch to the affected limb, crying and fretting if any one attempted to touch the liquid glue bandage in which it was encased. The whole limb was instinctively kept fixed and immovable for fear of disturbing the joint, which, under other circumstances, was comparatively painless, especially since it had been encased in silicate dressing. On exposing the knee it was seen to have slightly increased in size, and this slight increase in size and tenderness to the touch was mostly noticeable at maximum height of the fever. There was no redness or discoloration of the skin over the joint.

All these phenomena disappeared *pari passu* with the subsidence of the fever reaction.

On January 30, one week after last injection, the knee measured

Below patella,  $6\frac{1}{2}$  inches.

Across patella,  $9\frac{1}{8}$  inches.

Above patella,  $8\frac{3}{8}$  inches.

The limb was again encased in permanent liquid glue bandage.

On February 8, measurements:

Below patella,  $6\frac{1}{2}$  inches.

Across patella,  $8\frac{1}{2}$  inches.



Above patella,  $8\frac{1}{2}$  inches.

The bandage having been removed on this day, it was noticed: (1) That the exudation which had formerly presented a fibro-plastic character, was now much more fluid, serous; (2) the patella which had been fixed, immovable, as if imbedded in a plastic bed of exudate, was now quite movable; (3) the mobility of the joint had increased.

This dressing was again removed February 2. As it was now noticed, the thick plastic character of the first exudate was returning in the joint, and that the patella was not as movable as when the joint was last examined. The limb was again dressed in an immovable glue bandage.

It should be noted that the injections of 7 milligrams of the Koch fluid, three of which have been given since February 11, are not followed by any perceptible reaction either constitutional or local.

Summary to present date, February 27, 1891:

This little patient has markedly reacted both constitutionally and locally to the Koch fluid. He has now been under treatment over 37 days, and has received in all 16 milligrams of the fluid. Marked alterations of an organic character have been produced in the interior of the diseased joint, but thus far no positive effect in the direction of cure can be claimed.

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#### LUPUS VULGARIS OF FACE AND NECK.

Sam D., native of Louisiana, colored. Farm boy by occupation. Age 17 years.

Entered service of Dr. H. W. Blanc, at the Charity Hospital, on April 20, 1890, with the following history:

Father still living and believed to be in good health. Mother dead—cause unknown. Two sisters and two brothers, all healthy as far as patient knows, though not seen by him for some time.

Says he enjoyed good health as a child, and that the disease began about six years ago, as a swelling, "like a boil," on either side of the neck under the jaw, and that this broke, discharging "corruption." Before breaking the swelling grew as large as a hen's egg. Shortly after this he noticed a disease in the skin around the scars left by the "boils." This spread toward the left ear and upward on the left cheek. Is not sure when the right side of his cheek became involved, but is certain that his nose has been affected only about a year. Has never had rheumatism nor any venereal disease.

## CONDITION ON EXAMINATION.

A full-blooded negro boy, about five feet nine inches in height, rather slight of build. Has an eruption on face and neck, but skin elsewhere is normal. Head is bent forward and downward; as if drawn by the eruption on the neck. Cervical and epitrochlear glands slightly enlarged; but beyond this suggestive of syphilis, except the eruption to be described, as throat is normal and the internal organs are functioning properly.

Has a peculiar and remarkable eruption on face and neck, consisting of a smooth and thickened center and a papillary border. This center is slightly paler than the normal brown of the skin, and presents to the touch the resistance made by the scar of an extensive burn. It is very slightly scaly. The border is a clear-cut, raised, papillary growth, entirely surrounding the patch, being continuous and without a break. It varies in breadth from three-fourths of an inch to an inch and a half. The papillary growth constituting this border is hard, dry and well defined in some places and somewhat conical in shape, while elsewhere it is soft, moist and covered with a serum-like erudation and brownish crust. This patch covers the entire left cheek, being limited above by the left eye, which it approaches within a quarter of an inch, then, passing backward beneath the left ear, slightly involving the lobe, it ends on the left side of the neck about three inches from the processes of the cervical vertebræ.

Passing to the other side under the jaw it involves the skin over the thyroid cartilage, and extends upward within an inch and a half of the right ear. The entire nose is involved, and also the skin between the nostrils and the mucous membrane of the upper lip, the eruption on these places being continuous with the patch on the left cheek, already described. The nose, which was probably flat by nature, now has a depressed look, while the remainder of the disease, on the cheek and neck, produces disfigurement by a slight amount of swelling. The eruption is painless and shows no signs of acute inflammation. There are no scars outside of the papillary border. Lungs examined and found to be healthy. Bowels inclined toward costiveness.

The diagnosis of lupus verrucosus being made, an ichthyol salve was ordered and applied for about three weeks, resulting in some slight diminution in the size of the papillæ. About the middle of May the left submaxillary gland began to swell and finally suppurate. The abscess was opened and emptied, healing afterward under the ichthyol treatment.

On account of a slight resemblance to syphilis, suggested by the scalloped configuration of the lesion, and in order to remove all doubt of a syphilitic history, iodide of potassium was administered steadily for three months. This produced no visible impression upon the disease, and was permanently discontinued.

For the six months following his admission the patient was treated with a variety of topical remedies, including resorcin, salicylic acid and aristol, but the best results seemed to come from ichthyol.



During this time his general health had been good, when he contracted, in the first week of December, a severe erysipelas of the face, which greatly weakened him, and caused considerable swelling, nearly closing both eyes. When he recovered from this attack his face appeared more swollen than formerly, and his hair, especially on the side of the head, was more scanty.

After the erysipelas, all treatment was discontinued with the exception of the tincture of the chloride of iron, which was started during his convalescence and stopped at the end of three weeks.

At three different times sections of diseased skin from the edge of the lupus patch were removed for the microscopist, and examined by Doctors Bruns and McShane, pathologist, and assistant pathologist of the Charity Hospital. These gen-



tlemen made special stainings for the bacilli of tuberculosis and a large number of sections were examined, but without success.

During the month following the attack of erysipelas patient enjoyed good health and acted as assistant to the nurse of his ward. No observations were made upon his case at this time, and he was not seen by Dr. Blanc until January 10, 1891, when he expressed his willingness to undergo the Koch treat-



ment. Arrangements had been made at the Eye, Ear, Nose and Throat Hospital for the injection of a number of persons suffering from tuberculosis, and the patient, accordingly, entered that institution for treatment. It was arranged that this patient should be admitted into the hospital at least twenty-four hours before the injection, in order that observations might be made beforehand by the house physician and authorities of the hospital, thus preventing possible accidents. He was admitted January 14, and all the necessary observations made with the exception of an examination of the urine, an unfortunate and accidental omission, brought about by an excess of work demanded by other cases. If any blame is to come from this accidental omission the faculty have determined to bear it upon their united shoulders.

Brief notes upon this case, together with a chart of his temperature, pulse and respiration, have already been published,\* and as they covered a period of eleven days, they will be omitted from this statement.

January 15, 1891. Lungs examined and found normal. Slight ulceration of lupus patch under lobe of left ear and on back of neck. Mild eruption of papular eczema on abdomen, hips and small of the back. Patient has had this about two weeks; it causes no discomfort.

Height, five feet, five inches; weight, 104½ pounds, naked; temperature, 98.5; pulse, 106; respiration, 19.

After making the foregoing observations, the patient was injected, at 9:20 A. M., with one milligram of Koch's lymph. The fluid was injected into the muscles between the scapulæ. Twenty-four hours afterward two milligrams were injected into the right lumbar region.

On January 17, at the same hour, another injection was made, of five milligrams.

In the afternoon of January 17, patient voided urine containing bloody and purulent casts, and free red corpuscles. The reaction becoming violent, the injections were discontinued.

January 16, 3:25 P. M., pain in bowels—constipated; 8:10, bowels moved by magnesia.

January 17, 11:30 A. M., upper lip swollen, tender and red; 6:45 P. M., pain in bowels. Given a drachm of paregoric.

January 18, 9 A. M., pain in bowels; 11 A. M., vomited about three ounces of a greenish liquid mixed with small quantity of blood; 2:30 P. M., upper lip greatly swollen; 7 P. M., no urine since yesterday; ten drops fld. ext. jaborandi; foot bath; 9:45 P. M., no sweating; pain in hypogastrium; 11:20 P. M., no sweating as yet; 11:40 P. M., pilocarpin hypodermically; 12 M., profuse sweating; urine voided with great pain; urine contains blood; 12:20 A. M., easy and asleep.

January 19, 10 A. M., pain in hypogastrium; 11, face swollen under both eyes, which are nearly closed; entire patch swollen, and redness is visible through the brown skin. Except on edge of eruption, face is quite smooth, on account of the tenseness of the integument; 11, acetate and citrate of potash administered in half a glass of milk—vomited; 1:15 P. M., one-third grain of pilocarpin given hypdermically fifteen minutes ago, is followed by urination and diaphoresis; severe hypogastric pain; 2, acetate and citrate of potash; 2:30, milk given ten minutes ago is vomited; 3, acetate and citrate of potash; 4:15, half ounce of whiskey; 5:45, bitartrate of potash, one-half ounce; 6:30, milk punch; 7:40, vomited; 8, bitartrate

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\*See February number.

of potash; 8:10, half a cupful of milk; 8:45, vomited; 9:30, vomited; 9:55 P. M., potass. bitart., elixir Ducros,  $\text{℥ss}$ ; vomited; 10:30, potass. bitart., Ducros.

January 20, 1:20 A. M., bowels moved; Ducros vomited; 1:40, potass. bitart. vomited; 4:55, Ducros vomited; 7:40, potass. bitart.; 8:20, urinated with but little pain; 8:30, vomited; 9:30, vomited; 10:50, Ducros; 11:15, vomited; 11:45, ice; 12:30 P. M., ice; 12:45, Ducros; 1, bowels moved; 2:30, Ducros; bowels moved; 3:30, urinated without pain; 3:40, cup of milk; 4:30, bowels moved; 5:10, oyster soup and eight oysters; 6, chicken, steak and rice; 9:25, cup of milk; urine examined to-day contains blood and 75 per cent. of moist albumen.

January 21, 3 A. M., bowels moved; 4:25, pulse irregular; 7, urinated; potass. bitart.; 12:20 P. M., milk; 1:20, orange; 3:25, bowels moved; 3:45, pilocarpin hypodermically; 4, potass. bitart.; 4:10, urinated; 5, vomited; bowels moved; urinated with pain; half a cup of milk; 7:45, bowels moved; 8:30, bowels moved.

January 22, 1:30 A. M., milk; 3:20, milk; potass. bitart; 4, vomited; urinated without pain; 6:30, bowels moved; face is still swollen, but verrucous border to lupus patch is much less marked. Patient expels a muco-purulent fluid from posterior nares. Tongue has had for several days a dirty brown color, and is quite moist. Occasionally there are streaks of blood in the sputum, presumably from the posterior nares. 10:30, pilocarpin hypodermically; 10:35, vomited; 10:40, sweating; 10:45, urinated and bowels moved; 10:50, tablespoonful of whiskey; 11:35, vomited; 2 P. M., vomited; is semi-comatose; 5:45, mind is clearer; 20 minims of whiskey hypodermically; 7:45, slight chill; temperature 96.4 (see chart); two drachms of whiskey by mouth; 10:35, vomited; temperature 103 $\frac{2}{3}$ , pulse 114; 10:45, digitalis; 1:15, vomited; pain in abdomen; 11:20, bowels moved; passed one ounce of urine; 11:35, vomited; vin Mariani; urine loaded with albumen.

January 23, 12:05 A. M., vomited; 12:15, two drachms of vin Mariani; 12:20, mustard to epigastrium; 1:30, vin Mariani tried again, but vomited; 3, pain in abdomen; 3:15, half a drachm of vin Mariani; vomited; 3:45, mustard to epigastrium; 5:15, half ounce of Mariani; 9:20, urinated, and bowels moved; 10:15, Mariani; three ounces of milk; 10:30, bowels moved; 10:40, half ounce of whiskey; patient is strong enough to sit up in a chair for fifteen minutes; 11:25, elixir Ducros; 12:35 P. M., vomited coagulated milk; 1, vomited; 1:10, two drachms of vin Mariani; 2:30, vomited; bowels moved; 2:45, half ounce of whiskey; 7:30, two drachms of whiskey; 8:30,



two drachms of whiskey; 9:45, bowels moved and urinated; 10, elaterium by mouth, one-fourth grain; 10:30, bowels moved; 11:30, vomited; 11:45, vomited.

January 24, 12:05 A. M., vomited; 12:10, half ounce of whiskey; 1:30, bowels moved, vomited; 2:15, six drachms of milk; 3:45, vomited; 4:55, half ounce of whiskey; 5:50, bowels moved; 9:15, one-fourth grain of elaterium; 9:30, good action from bowels; 9:55, vomited; 10:15, vomited; 10:40, vomited, pain in abdomen excessive; 11:10, vomited, bowels moved, urinated; 1:25 P. M., half ounce of whiskey; 2, vomited; 3, Valentine's meat juice; 3:05, vomited; 3:35, Valentine; 4, vomited; 4:35, Valentine; 4:45, vomited; 6, bowels moved; 7, bowels moved, urinated; 9:30, Valentine's meat juice by the rectum; 10, digitalis and whiskey hypodermically; bowels moved, urinated; 10:20, mustard and linseed poultice to abdomen. On this day the swelling that followed the reaction has subsided to some extent, leaving some œdema of the frontal region. Patient's hair continues to fall out, and his general appearance is not unlike what was presented during his convalescence from erysipelas before the lymph was injected. The raised edges of the lupus patch have disappeared, and no well-defined verrucous condition can now be detected.

January 25, 1 A. M., one drachm of Valentine's meat juice; 1:30, half ounce of whiskey, bowels moved; 2:30, one drachm of Valentine; 3:20, temperature 101, pulse 96, respiration, 35;\* one drachm of Valentine; 4:40, bowels moved; 5:40, half ounce of whiskey; 6:40, Valentine; temperature 99, pulse 102, respiration 33; 9, one drachm of Valentine; 9:45, vomited; 12:30 P. M., one drachm of Valentine; 12:40, vomited; 1:15, half ounce of vin Mariani; 1:30, small cup of strong coffee; 2:15, temperature 96, pulse 78, respiration 26; one drachm of Valentine; 2:45, vomited; 4:30, half ounce of Mariani; 5, bowels moved; temperature 96 $\frac{3}{4}$ , pulse 70, respiration 30; 5:30, one drachm of Valentine; 6:30, half ounce of vin mariani; 7:10, bowels moved; 7:30, one drachm of Valentine; 8:15, temperature 97, pulse 78, respiration 26; 8:30, half ounce of Mariani; 10:45, half ounce of Mariani; 11:10, bowels moved.

January 26, 12:05 A. M., vomited; 12:45, one drachm Valentine; 1:30, bowels moved; 1:45, half ounce of Mariani; 2:45, vomited; 3:15, one drachm of Valentine; 3:50, temperature 98 $\frac{2}{5}$ , pulse 72, respiration 28; half ounce of Mariani; 5:40, one drachm of Valentine; patient has had pain in abdomen all night; 8:40, vin Mariani; 9, œdema over frontal

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\*For record of temperature, etc., up to this date see February number.

bone continues and is painful on pressure; cup of hot milk; 9:45, urinated; urine still loaded with albumen, but blood is not as abundant as formerly; 10, one drachm of Valentine; 10:30, temperature  $98\frac{3}{4}$ , pulse 70: hot toddy; 11, vomited without pain; 11:30, vin Mariani; 12:25, p. m., two ounces of meat soup; half ounce of Mariani; 1:30, half ounce of Mariani; 2:30, half ounce of Mariani; bowels moved; urinated; 3:30, temperature  $101\frac{3}{4}$ , pulse 98, respiration 30; half ounce of Ducros; 4:40, half ounce of Mariani; 5:40, half ounce of Mariani; 6, temperature  $102\frac{3}{4}$ , pulse 94, respiration 36; vomited; 6:30, one-fourth grain of elaterium by mouth; bowels moved, urinated; 8, vomited; temperature  $101\frac{3}{4}$ ; 9:10, bowels moved, urinated; 9:20, potass. bitart.; 9:45, bowels moved; 10:20, bowels moved; 11, Ducros and Valentine, one drachm each.

January 27, 1 A. M., temperature  $99\frac{1}{4}$ , pulse 84, respiration 28; one drachm of vin Mariani; 2:40, bowels moved; 4, Ducros and Valentine, one drachm each; 6, temperature  $97\frac{1}{4}$ , pulse 90, respiration 32; Ducros and Valentine, one drachm each; 8:15, two drachms potass. bitart.; 9:40, bowels moved; 10, half ounce Mariani; 10:30, bowels moved; 11:30, one drachm of Ducros; 12:30, temperature  $98\frac{1}{4}$ , pulse 84, respiration 26; half ounce of Mariani; 1 p. m., vomited; 1:40, Ducros and Valentine, one drachm each; 2:30, vomited; 4, temperature  $99\frac{1}{4}$ , pulse 66, respiration 26; 4:30, two drachms of Ducros and four drachms of whiskey; 6:30, bowels moved, urinated; 6:40, two drachms of Ducros and six drachms of whiskey; 7:45, temperature  $100\frac{1}{4}$ , pulse 90, respiration 34; 10:15, bowels moved; 10:50, vomited; 11, temperature  $101\frac{3}{4}$ , pulse 100, respiration 32; one drachm of Ducros and two drachms of whiskey; 12, bowels moved; 12:10, one drachm of Ducros; 12:50, vomited; 1:10 A. M., one drachm of Mariani; 1:35, temperature  $99\frac{1}{4}$ , pulse 96, respiration 35; 2:10, one drachm of Ducros; 12:50, vomited.

January 28, 1:10 A. M., one drachm of Mariani; 1:35, temperature  $99\frac{1}{4}$ , pulse 96, respiration 35; 2:10, Ducros, one drachm; 8:15, Ducros one drachm, whiskey three drachms; 9:45, temperature 99, pulse 86, respiration 36. For several days there has been some swelling over the right submaxillary gland: this has broken and pus is discharging; œdema of face disappearing; large crusts are peeling from nose and edge of lupus patch; œdema of face nearly gone; 11:15, one drachm of Ducros and three drachms of whiskey; 11:20, an orange; 12:10 p. m., bowels moved, lemonade, sat up five minutes; 12:45, temperature  $99\frac{1}{4}$ , pulse 88, respiration 28; 1:20, vomited; 2, vomited; 2:35, urinated, vomited; 3:45,

temperature  $99\frac{3}{8}$ , pulse 88, respiration 40, vomited; 4:15, potass. bitart.; 4:45, vomited; 5:10, vomited; 5:30, two drachms of Mariani; 7, bowels moved; 7:40 vomited; 8:15, temperature  $100\frac{1}{8}$ , pulse 96, vomited; 8:45, elaterium one-fourth grain; 9:10, vomited; 9:45, vomited.

January 29, 1:30 A. M., vomited; 3, vomited; has been expectorating muco-pus tinged with blood; 4:30, bowels moved; 9:15, vomited; 9:50, temperature  $98\frac{4}{8}$ ; pulse 84; respiration 40; 10:45, vomited; 11:10, hot tea; 11:35 vomited; 11:55, one drachm of Mariani; 12:10, vomited, bowels moved; 12:50, temperature  $98\frac{4}{8}$ , pulse 84, respiration 32; 1:25 P. M., vomited; 2:15, one drachm Valentine and small quantity of tea vomited; 3:35, fifteen minims each of whiskey and water hypodermically; 4:25, vomited; 6, bowels moved; one-third grain of pilocarpin hypodermically; 6:10, vomited, urinated, sweating profusely; 6:30, vomited; 6:40, bowels moved; 7:30, two drachms of whiskey; 9, one drachm of whiskey hypodermically; 9:25, half ounce of milk; one drachm of whiskey hypodermically; 10, six drachms of milk; 11, one-half ounce of milk; 11:20, digitalis in whiskey; 12, one ounce of milk; bowels moved; nostrils have a fœtid odor; urine still very albuminous, but has fewer blood corpuscles.

January 30, 12:15 A. M., one capsule of diuretine; 1, two ounces of milk; 1:15, one capsule of diuretine; 1:30, one ounce of milk; 2, one ounce and a half of milk; 2:15, one capsule of diuretine; 3:15, one capsule of diuretine in a little milk; 5, two ounces and a half of milk; 5:30, one capsule of diuretine; 6, an ounce and a half of milk; 7, two ounces of milk; 10, temperature  $97\frac{1}{8}$ , pulse 80, respiration 30, table-spoonful of Mariani; 10:45, small quantity of coffee; 11:45, small quantity of coffee; 12 P. M., bowels moved; 2:20, half a glass of milk; 2:45, vomited; 6:15, bowels moved; 6:30, small amount of milk and Carnrick's beef peptonoids; 7:35, vomited; 9:20, bowels moved; 9:30, vomited; 10, vomited; 10:40, vomited; 11:40, vomited.

January 31, 2:45 A. M., vomited; 9:25, temperature  $97\frac{1}{8}$ , pulse 84, respiration 32; 11:45, bowels moved; 12:10, P. M., half ounce of milk punch; 3:15, Carnrick's peptonoids with milk by enema; one drachm of whiskey and ten drops of digitalis hypodermically; 3:40, half a cupful of milk; 4:40, one ounce of milk and one dessert-spoonful beef peptonoids by enema; 5, vomited; 5:30, bowels moved; 6, one half ounce of Valentine and one ounce of water by enema; 6:30, vomited; 7, one and one-half ounces milk and one dessert-spoonful powder by enema; 8:10, bowels moved; 9:20, vomited; 10:10, vomited.



February 1, 8 A. M., respiration 44; 12:15, P. M., vomited blood; 4:20, whiskey, hypodermically; 5, milk, half cup; 6, death.

Patient died by asthenia, passing away quietly and without convulsion, seventeen days and a half after the inoculation. The nephritis, which declared itself so soon after the injection, was not anticipated, as the patient had shown no sign of weak kidneys at any time; a statement which is borne out by the autopsy. Indeed there is no more reason for concluding that there was previous disease in the kidneys than that there was inflammation in the abdomen, for the first symptom noticed after the injection was a pain and tenderness in the bowels, which was more or less constant up to the time of death.

From time to time examinations of the urine were made, some of which have already been noted. At no time was there found a smaller quantity of albumen than 25 per cent., the amount steadily diminishing toward the end. The blood diminished *pari passu* with the albumen.

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#### REPORT OF THE AUTOPSY ON SAM. DIXON, AND THE CHANGES FOUND IN THE ORGANS.

[A. McSHANE, M. D., Pathologist.]

The autopsy was held on February 1, 1891, at 10 P. M., four hours after death.

External appearance: somewhat emaciated. Eruption on face.

*Thorax.* No liquid in the pleural cavity. There were numerous, small, well marked ecchymoses under the pleuræ, scattered over the lungs. The lungs were free from tubercles; not œdematous; and presented nothing abnormal except the subpleural hemorrhages.

The cavities of the heart were all distended with blood. Pericardial fluid normal in quantity and appearance.

*Abdomen.* Upon opening the upper part of the abdomen a string of fibrinous exudate was found upon the anterior surface of the stomach in contact with the anterior border of the liver. Later on, more deposits of fibrin were found on the lower part of the ileum close to the ileo-cæcal valve, corresponding to an intensely congested part of the small intestine; and in the left hypochondrium, where were found evidences of a marked peritonitis. The spleen was completely enveloped in a film of exudate, which could be peeled off like a capsule. The anterior surface of the left kidney was covered by exudate, but this was not so firm as that around the spleen. The cardiac end of the stomach presented a good amount of exudate.

The vessels of the mesentery were somewhat engorged. The mesenteric glands were slightly enlarged. The enlargement was not confined to the glands of any particular region, but involved all of them.

The stomach and intestines were examined carefully, but no perforation was found. In the lower part of the ileum, about six inches above the ileo-cæcal valve, the ileum was intensely congested, and its peritoneal surface was lustreless, eroded and partially covered with fibrinous exudate. The congestion extended over about three inches of the gut, and embraced the whole circumference of the intestine, although it was most intense opposite the mesenteric attachment, and corresponded to the eroded portion. No Peyer's patch, however, was found in the congested area. When the intestine was laid open, Peyer's patches and the solitary glands were found to be not unduly prominent. In the lower part of the ileum the patches were congested, but not swollen, indurated, or opaque. Some remnants of badly masticated and undigested vegetable food were found in this part of the bowels.

The spleen was slightly enlarged. It was enveloped in a coat of fibrinous exudate, as already mentioned. The spleen was sliced, but no tubercular deposits were found. The organ was congested and the pulp not much softer in consistence than normally.

The liver was enlarged and much congested. The peritoneum covering the organ was slightly thickened and milky in several places; these spots were old. No tubercles were found in the liver. In consistence, the organ was somewhat firm. The cut surface bled profusely

The pancreas seemed to be normal. The kidneys were enlarged and intensely congested. There was fibrinous exudate over both kidneys, but more on the left side than on the right. The left kidney was larger than the right, and more intensely congested. The capsule peeled off readily on both sides. The cortical arches and the cortical columns were enlarged, swollen. The malpighian pyramids were darker than the cortical substance; not changed otherwise apparently.

Stomach and bowels congested. The surface of the mucous membrane in the deeply congested part of the ileum showed several small ecchymotic spots.

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#### MICROSCOPICAL EXAMINATION.

Sections of the various organs were made, and some of them stained for bacilli.

The sections of the slightly enlarged mesenteric gland did not present any changes. There was no breaking down

of tissue, and no evidence of marked inflammatory change. Sections stained according to Gram's method failed to reveal any tubercle-bacilli.

Sections of a Peyer's patch showed the follicles to be unchanged.

The spleen was congested, but no fixed tissue changes were found.

The liver was much congested, the congestion being chiefly around the intralobular veins. The hepatic cells were unchanged; the connective tissue was not increased in amount. It was thought at the autopsy that there might be some amyloid degeneration, but the microscope showed that the capillaries were unaffected; and, further, methyl-violet did not give the reaction of amyloid material.

The chief changes were found in the kidneys. These organs presented the typical appearance of acute tubal nephritis. The whole of each kidney was congested, but the cortex was not as dark as the Malpighian pyramids. Under the microscope the changes were seen to reside chiefly in the parenchymatous element. The Malpighian corpuscles were swollen, and, in the stained sections (picro-carmin), they stood out prominently. There was no hypertrophy of the interstitial tissue. The tubular epithelium was profoundly altered. The cells were swollen, their borders were indistinct, and the tubules were packed with fibrinous material, corpuscles, and debris of epithelial cells. The cell-body was granular and cloudy, and the nuclei not very distinct. The cortical epithelium did not absorb the carmine as much as that of a healthy kidney; the epithelium of the pyramids seemed to be less affected. The granular condition of the cortical epithelium cleared up under the action of acetic acid, and was not affected by ether. Osmic acid had a marked effect. Some sections were left in a weak solution for two hours, and others for twelve hours. The results were the same in both instances. There was no spotting of the glandular epithelium, which would have taken place if there had been any fatty degeneration. There was a granular discoloration occupying the lumen of the uriniferous tubules. The epithelium was not discolored; the black granules lay imbedded in the intratubular debris, and was found in the tubes of the pyramids as well as in those of the cortex. The coils of tubes lying close to the Malpighian corpuscles contained most of these granules; the portion of the tubules chiefly affected by the osmic acid corresponded, most probably, to the primary convoluted tubule.

The condition of the kidneys was one of undoubted acute tubal nephritis



After death, the bladder contained three ounces of dark urine. This urine contained 25 per cent. (approximately) of moist albumen; and under the microscope it was seen to contain numerous casts in which were imbedded leucocytes, granular matter, and colored blood-corpuscles. There were some free leucocytes, blood-corpuscles, and renal and bladder-epithelium. The amount of blood was much smaller than that in the urine examined on January 17, 1891.

Pieces of skin were taken from the edge of the lupus patch on the side of the neck and from the nose; the latter was removed by vertical incisions, a little to the right of the median line, and included skin and mucous membrane. Several sections from each of the pieces of skin were stained for bacilli, but no bacilli have as yet been found. A great number of sections should be examined in order to enable us to say that no bacilli are present at all. This part of the investigation will be resumed.

The exudate found upon the peritoneum showed the well known fibrillar appearance of fibrin, in the meshes of which a vast number of leucocytes were embedded.

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## EDITORIAL ARTICLES.

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### THE STATE MEDICAL SOCIETY—WHERE SHALL THE NEXT SESSION BE HELD ?

The time for the annual meeting of the State Medical Society is fast approaching. In about seven weeks the representative men of the profession of Louisiana will be called upon to maintain the dignity of their body by showing what they can accomplish in a scientific way, and in the elevation and advancement of the profession at large.

The history of the State Medical Society of Louisiana has been one of struggles against adverse circumstances. The membership (168) is small when we consider the total number of physicians in the State (over 1000). The evident lack of solidarity is the great fact that strikes any one who studies the state of the professional body in Louisiana. Any movement tending to the advancement of the medical profession must have the moral support and active coöperation of the best phy-

sicians in the State. No favorable legislation need be expected when the profession can not make its force felt; and there is no agency better fitted to impress legislators than a strong, well organized body of active and intelligent men. Our physicians do not lack the intelligence, and energy is not an infinitesimal quantity, but individual efforts directed to obtaining diverse results can never have the weight and value attaching to recommendations emanating from a strong and representative organization.

Many of the evils under which the profession of the State is now laboring could be remedied if the whole medical corps would move as one man. This can only be done through a State society, in which grievances could be ventilated and discussed and plans matured for their correction. In the multitude of counsel safety certainly lies; and any measure receiving the endorsement of a representative State society would be apt to be just what is required to promote the welfare of the profession, and to impress our law makers with the necessity of protecting the rights of one of the most respected callings in life.

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Our State society does not contain on its list of members more than one-fifth of the physicians of the State. Is that encouraging? Can we expect to achieve any results of permanent value when so many of our men stand back and withhold both their moral support and active efforts from movements looking to the advancement of the profession at large? No; it is hardly reasonable to suppose that the active and progressive minority, comprising the enrolled members of the society, can succeed in accomplishing anything in the face of the supineness of the indifferent majority.

The value of organization is too apparent to require any arguing. Our State Legislature will convene again in 1892. We hold one meeting before the session of the Legislature, and another during the sessions. If we expect the Legislature to do anything for us, we must not postpone action until next year. In order to secure favorable action by the Legislature, we need two things: first, well digested and tangible plans

which can be constructed into laws; second, the *active support of the whole profession* of the State.

Last year, when our annual meeting was declared off, Dr. Owen, the president of the society, tried to compensate for the failure to meet by appointing a committee charged with the duty of drawing up a bill regulating medical practice in Louisiana. (See N. O. MED. AND SURG. JOURNAL.) The result of the committee's labors was presented to the Legislature at its last session. It will be remembered that the bill passed the House, but it was defeated in the Senate. The defeat was caused by the opposition of the homœopaths, the indifference of the majority of the regular physicians of the State, but above all by an influence totally unexpected, and which could not therefore be overcome in time to prevent, in the hurry incident to the closing days of the legislative session, the indefinite postponement of this bill. This influence, we are compelled to tell the members of the society, came from its own body, and we believe was the main factor in accomplishing the defeat of the bill. On this subject we have before expressed ourselves so emphatically that we feel it would be unnecessary to say more now.

A house divided against itself can not stand. Our physicians should move as one man. Can we say that all the physicians of the State, even the majority of them, are ready to enlist in a crusade against common evils, and to lend their hearty support to any effort to correct them? The history of our struggling State society compels us to believe that a large number of our brethren are indifferent to the public welfare, and that the feeling of fellowship is as yet in a latent state.

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But it is not necessary to yield to the languid conclusion that this latent force may not be made kinetic. An active proselytizing work should be carried on incessantly between now and the next session of the Legislature. Every present member of the society should feel that he is a committee of one on whom devolves the duty of inducing at least one more physician to join the society. With a working membership of six hundred, it would be difficult to estimate the benefits that would accrue to the profession at large. All individuals are interested



in the good of the community, and no policy could be narrower or more short-sighted than that which prompts a man to sacrifice the general welfare to his petty interests. Such a policy leads to disorganization and demoralization. The one great need of the hour is a campaign of organization. All the regular physicians should be invited, requested, urged, dunned, or forced to enter the fold, in order to further the interests of the profession at large, and, through these, his own.

The methods of increasing the membership are matters of detail. The large fact is to work to that end. Our worthy president, Dr. C. D. Owen, will doubtless suggest means of enlarging the society and extending its sphere of usefulness.

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The place at which the next meeting is to be held is a matter of very great importance, for the accessibility of the meeting place will determine in a great measure the degree of success of the meeting. Last year, the unusually high water in the rivers washed away some of our levees and caused great disaster; travel was interrupted, and the losses incurred by our lay fellow-citizens made themselves felt in the financial affairs of the medical profession. These floods happened near the time set down for our meeting, but this had to be postponed indefinitely, subject to the call of the president. No meeting was held last year, and the time for the meeting of 1891 fast approaches. The meeting intended for 1890 was to have been held in Baton Rouge.

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Is it advisable to hold the meeting in Baton Rouge? We think that New Orleans should be chosen as the place at which all the future meetings should be held. New Orleans is the most accessible place for physicians in all parts of the State; it can provide ample accommodation for any number of visitors, and the large number of physicians residing in the city will assure a full attendance at the meetings. Some years ago it was thought that, by holding meetings at the prominent towns in the interior, many physicians would be induced to join the society. Meetings were to be held at New Iberia, Alexandria and Shreveport, after which all future meetings were to be

held in New Orleans, on account of the manifest advantages offered by this city as a place of meeting. Meetings have been held in the above mentioned places and also in Baton Rouge, and now New Orleans should at least have a turn.

To some persons it might appear selfish for the physicians of New Orleans to urge that the next and all future meetings be held here; but we understand that quite a number of physicians in the country, members of the State Medical Society, are also strongly in favor of making New Orleans the permanent meeting-place for the future. We feel that a careful survey of the available localities for holding our meetings will convince any fair-minded person of the advisability of holding our sessions in New Orleans.

#### ON CATGUT INFECTION.

Brünner, of Zurich, has investigated very thoroughly this important question, which became all the more significant for surgery when in recent times the clamor arose demanding that catgut be completely banished from surgery.

Brünner describes first the manner of obtaining raw catgut, and afterward the various methods of preparing and preserving it. In this connection deserves to be mentioned the service Reverdin did for us in showing how to obtain by sterilization with dry heat an excellent catgut. As far as concerns clinical experiments with catgut, many unfortunate accidents from infected catgut are mentioned in literature, as, for example, those of Kocher, Zweifel, Volkmann and others, all of whom lay the blame on carbolized oil catgut.

Especially favorable reports come from many surgical and gynecological clinics concerning sublimate catgut. The careful review of the experience had for four years at the Zurich clinic with herniotomies, laparotomies and struma-extirpations, when catgut was always used as the ligature material, gave no indications of any blame that could attach to this material, and the same could be said of the cesarean operations of Saenger, Credé and Caruso, where catgut was used for buried uterine sutures.

As to the absorbability and quality of the various preparations of catgut, the author agrees with Bruns that suppuration, at all events, hastens the solution of the catgut, there being otherwise no difference perceptible. Though chromic catgut and Reverdin's are the most resistant of the preparations of catgut, they are all inferior in power of resisting solution to raw catgut.

The second part of B.'s article is of great interest, as it considers the bacteriological investigation of catgut. In this, he furnishes for the first time a conclusion, derived from the systematic investigation of this question with all the aids of bacteriological technique, and by means of experiments above reproach. All the final results will be mentioned.

Examination of various kinds of catgut from varied sources, specimens for the most part long kept, showed that the disinfection by sublimate carried out in the different manufactories sufficed to make raw catgut surely and permanently germ-free; Reverdin's method likewise rendered catgut sterile. In carbolized, chromic and juniper preparations, microörganisms were often found, although never any pathogenic ones.

In order to put the reliability of sublimate disinfection to the test, B. prepared some catgut from an animal affected with anthrax. This produced invariably anthrax in animals into which it was introduced. He succeeded, however, by means of disinfecting it, in rendering this same material harmless, without impairing its usefulness.

He considers the following the best way of preparing catgut:

The raw catgut is brushed off with potash soap; is then placed directly, or after a half-hour's stay in ether, for twelve hours into a 1:1000 watery solution of sublimate. It is to be preserved in sublimate 1.0, alcohol, absolute, 900.0, glycerine 100.0.

As regards substitutes for catgut, experience seems not particularly favorable to silk, especially when used for ligatures.

Many surgeons who, following Kocher's warning, abandoned catgut for silk, saw themselves forced to return to catgut. Likewise, experience with linen thread does not en-



courage one to substitute it for catgut. From Brünner's point of view the abandonment of catgut in favor of these substitutes would, indeed, lead to a simplification of the antiseptic apparatus, but would surely not be in accord with progress in antiseptics.

Bratz, of Heidelberg, reports in the *Beiträge zur Klin. Chirurgie* some bacteriological and critical researches on the preparation of catgut. An abstract of his work we find in *Centralblatt für Chirurgie*, No. 6, 1891.

He first calls attention to the necessity of removing the fat from the raw catgut in order that the antiseptic may exert its influence. He then criticises Brunner's investigations in so far as he chose for his experiments, the easily destroyed anthrax *bacilli*, and not the spores to estimate the value of disinfection methods.

Catgut contains 1.5 per cent. of fat. Ethylic ether is the best means of getting rid of this. He thinks the sterilization can best be accomplished by dry heat, according to Reverdin's plan; four hours at 140 degs. C. (284 degs. F.) To this end, B. recommends a sterilizer with double wall, with oil filling and a Reichert's heat regulator.

He mentions a number of points in Brunner's work and criticizes them, occasionally finding fault, unfortunately, however, without demonstrating in many instances by experiment the truth of his certainly correct views. He concluded by declaring that the sublimate gauze heretofore prepared (without previous formal deprivation of fat) is germ-free usually, but that we must, in spite of this fact, still seek for a rational method of sterilizing. He proposes to deprive of fat by immersion of the raw catgut for one or two days in ether, then to lay it for twenty-four hours in 1:1000 sublimate water, afterward preserving in absolute alcohol; or to deprive of fat and then sterilize according to Reverdin's method and keep in absolute alcohol.

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Dr. W. W. Keene, of Philadelphia, has devised a form which will be welcomed by all busy surgeons. He has drawn up an operation blank, whereon are printed lists of instruments required in any operation, medicines, dressings, etc. It is so

arranged that one-half is to be torn off after being filled out, and sent to the drug store; the other half is checked off and handed to the nurse. The half for the druggist contains a full list of all materials and dressings used in operations; the half for the nurse contains two parts: directions for preparing the patient so as to have him ready for the operation the instant that the surgeon arrives, and directions for preparing the operating room and all the accessory paraphernalia of an operation.

The use of these blanks will save the surgeon a vast amount of valuable time, and more important still, will effectually prevent dangerous misunderstandings as to the disinfection of the patient and his surroundings. The blanks are printed by Lea Bros. & Co., of Philadelphia.

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## ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

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### MEDICINE.

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#### HYDRASTIS VS. PHTHISIS.

By A. JUDSON PALMER, M. D.

About one hundred years ago William Cullen defined phthisis as "an expectoration of pus or purulent matter from the lungs, attended with a hectic fever." Later, the tubercle was discovered, and it was found that this tubercle contained a virus. In the year 1882 the tubercle bacillus was discovered by Koch. It is now generally conceded that tuberculosis, whether of the lungs or other tissues, is coincident with the presence of these microphytes. The important consideration, then, is how to exterminate these pathogenic germs, or prevent the morbid process which they induce.

I have used hydrastis in my practice for the past thirty years as a local application to inflamed mucous surfaces, and noting its efficiency, especially in inflammatory conditions of the pharynx, it occurred to me that it might be equally efficacious in the treatment of bronchitis if it were possible to apply it directly to the inflamed membrane. Accordingly, about four years ago, to accomplish this, I administered it by inhalation in the form of a vapor, freed from spray, and thus

secured its deposit where required. The result was very satisfactory. I then used it in a case of bronchitis complicated with chronic hepatization, due to incomplete restoration from an attack of pneumonia which had occurred two months previously. I was surprised to find that not only the bronchitis, but also the pneumonic deposit disappeared. I then determined to test its virtue in phthisis. I have now been using it in the different stages of this disease over three years, and I think the result of my experience justifies me in asserting that in it I have found a remedy of remarkable efficacy in the treatment of phthisis, if properly and perseveringly used; and that the majority of cases, while in the early stages, can thus be restored to a condition of apparent health.

Precisely in what manner its extraordinary influence is exerted is a question upon which opinions may differ, but I have demonstrated to my own satisfaction that in some way it has a decidedly beneficial action upon this disease.

During the first month of treatment the night sweats usually disappear, and the cough and expectoration are greatly diminished; the patient has a better appetite, better digestion, and gains in strength.

In cases advanced so far as to be incurable, the patients are so much relieved that they regard the remedy as indispensable to their comfort. Its hæmostatic properties render it of great value as a preventive of hemorrhage.

I obtain the best results by using it in combination with chloride of sodium, one part of the fluid extract of hydrastis can. to three parts of a saturated solution of salt.

The fact that I use it in conjunction with salt may lead to the supposition that salt is the principal agent in effecting the cure: but I have obtained the same results by using it mixed with glycerine and water.

The volume of vapor should be moderate at first and gradually increased from day to day as the patient becomes accustomed to its use, after which I advise deep inspirations to insure the entrance of the vapor to the remote air cells. When patients are taking the inhalations at their homes, the physician should visit them sufficiently often to watch the effect of the treatment and to advise in regard to the strength of medicine and the volume of vapor.

In most cases I continue the inhalations once or twice daily until I observe a decided improvement, after which I regulate the frequency according to circumstances.

Care, of course, should be taken to place the patient under as favorable hygienic conditions as possible.—*Medical Current.*



## SURGERY.

## ON COCAINE AS EMPLOYED IN DENTISTRY.

[By DR. BLEISCH, of Mannheim, Germany.]

Cocaine injected in solution of quite minimal strength, say 0.2 to 0.4 grain into the gums, is perfectly innoxious. Not every tooth can indeed be extracted without causing pain, even with the help of cocaine, yet it does so far yield relief that most patients declare the operation to have occasioned very little suffering. To employ cocaine rightly, one must first of all clearly understand its influence as an anæsthetic. This is strictly local. In injecting cocaine, only the tissues immediately surrounding the tooth to be removed should be permeated by the solution, and it should not be allowed to penetrate further, since otherwise it is liable to become absorbed by the blood vessels, enters the circulation, and in large doses produces very serious effects.

Formerly I used to employ a 10 per cent. solution of cocaine, but soon perceived that this was too strong, and during the last three years have found a 5 per cent. solution to meet all requirements. A 5 per cent. solution I prepare as follows. I have always a stock of Boehringer's cocaine in tubes containing each  $\frac{1}{4}$  gramme (= 3.8 grains). When the solution is needed, the contents of one such tube is introduced into an empty 5 gramme vial (it generally holds about 6 grammes = about 92 grains), which is then filled with distilled water containing 1 per cent. of carbolic acid solution. In this way I get a solution of cocaine of about 5 per cent. strength, the slight addition of carbolic acid enabling the solution to keep the better. The 5 gramme vial suffices to fill a Pravaz glass syringe five times; a full syringe contains therefore about 0.77 grain of hydrochlorate of cocaine. Half a syringe of injected is sufficient to produce in course of five to ten minutes an adequate anæsthesia.

When a tooth is to be extracted, the cocaine solution should previously be well rubbed into the surrounding gums. In doing so, the cotton wool employed must not be moistened to excess, or the solution will flow into the mouth, which should be avoided.

The Pravaz syringe is now half charged, and beginning at the collar of the tooth, is introduced along the roots on the labial side. The canula is now turned in order to produce a small aperture, or sac, into which the solution is injected till the tissues surrounding the roots change color. This pallor is of course only transitory, and disappears directly the cocaine

has become absorbed by the gums and porous alveole. Before the canula is withdrawn, the gums should, if possible, be gently rubbed to increase the power of absorption. If in withdrawing the canula, part of the solution should escape, the patient should be requested to rinse his mouth out. A similar injection is then carried out on the lingual or palatal side of the tooth. In most cases one will find that a  $\frac{1}{4}$  syringe = 0.192 grain of cocaine hydrochlorate suffices. I never inject more than half a syringe.

After injection one should wait five to ten minutes. The forceps, previously of course most carefully purified and disinfected, should be dipped into hot water so as to be warmed to at least blood heat. If with injections of cocaine of such minimal strength, any disagreeable results nevertheless follow, these are by no means symptoms of poisoning, but simply attacks of fainting, to which the patient would have been subject without the injection of cocaine. The fainting of patients is always an unpleasant incident, but can not be avoided. There are patients only too strongly inclined to faint. Probably every one of my professional brethren knows dozens of such cases. I therefore avoid employing injections of cocaine when fainting is to be apprehended, that is, with my timid patients, or those whose dread of the extraction of a tooth has caused them sleepless nights, and whose nerves are consequently shaken. If I do give such patients cocaine, it is only after administering a stimulant. That does not indeed prevent their fainting, but somewhat promotes the activity of the heart. Employed with proper knowledge and care in minimal doses of 0.190 to 0.385 grain, cocaine is unquestionably one of the safest of drugs, and has the further advantage of being so cheap that we can give the poorest patients the benefit of it, since even if we receive no payment at all, 0.385 grain of cocaine costs only about a cent.

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## BOOK REVIEWS AND NOTICES.

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*Prof. Koch's Method to Cure Tuberculosis*, popularly treated by Dr. Max. Birnbaum. Translated from the German by Dr. Fr. Brendecke. With an appendix, being Prof. Koch's first communication on the subject. Translated from the *Deutsche Medicinische Wochenschrift*, and explanatory notes by the author. Milwaukee, Wis., H. E. Haferkam, publisher. Price: paper, 75 cents; cloth, \$1.

This little brochure manages to cover the subject considered in a very complete manner. We are told what are the various forms of tuberculosis and how to recognize them; how to use Koch's remedy, its dose and its effect upon the tissues.

We have not seen any one treatise which gives as much valuable information about "Kochine." The simplicity of its style makes it readable to the laymen as well as to the physician.

H. W. B.

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*Transactions of the Medical Society of the State of Pennsylvania*, at its Fortieth Annual Session, held at Pittsburgh, 1889-90. Philadelphia: William J. Dornan, printer. 1890.

These transactions show a large attendance and a number of well written original papers. We have read some of these papers with much interest. One in particular, that of Dr. Shoemaker on *The Physiological and Therapeutical Action of Sulphur*, is an excellent plea for the more constant use of this substance in such affections as bronchitis, hepatic indigestion, and acute infectious disorders. Given internally, it acts upon the skin and mucous membranes, modifying their secretory functions.

The report contains able addresses on surgery, medicine, obstetrics and mental disorders.

H. W. B.

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*Text Book of Materia Medica for Nurses*. Compiled by Lavinia L. Dock, Graduate of Bellevue Training School, etc. New York: G. P. Putnam's Sons, 1890. [New Orleans: Armand Hawkins, 194 Canal street.]

The nurse is not the physician, yet in many cases the physician's skill would be of no avail if there were lacking the constant attention to his orders which only an intelligent trained nurse can give. The nurse is the physician's indispensable ally, and the life of a patient often depends upon the manner in which the physician's line of treatment is carried out. The more intelligent the nurse the less need the physician worry about his cases when they are out of sight. Books and measures that are calculated to elevate the nurse, certainly increase the nurse's value as an ally, and should be commended by all physicians. Comprehensive text books for the use of physicians are numerous enough, but they are somewhat beyond the range of the nurse, and a gap is thus left in medical literature. This gap is in a measure closed by Lavinia L. Dock's book on materia medica, which is written by one who has personally



become acquainted with the requirements of nurses, and who is well qualified to fulfil these. Her book is the first of the kind to enter the field, but it must not be thought that it is a crude attempt to supply a want; the book is well prepared, and gives just such information about materia medica as an intelligent trained nurse should possess. A. McS.

*An Illustrated Encyclopædic Medical Dictionary.* Being a dictionary of the technical terms used by writers on medicine and the collateral sciences in the Latin, English, French, and German languages. By Frank P. Foster, M. D. With the collaboration of Wm. C. Ayres, M. D., New Orleans; Edward B. Bronson, New York, etc., etc. Vol. II. With illustrations. New York: D. Appleton & Company, 1890.

The second volume of Foster's grand work embraces pages 753 to 1544, quarto.

There are many medical dictionaries, etymological as well as practical. Foster's dictionary is not one of practical medicine; it confines itself to the definitions of *all* of the terms used by medical writers. But in saying that the scope of the work is thus *confined*, it is not intended to imply that its field is in any sense narrow; on the contrary, a work that proposes to embrace all the technical terms used in medicine and the collateral sciences must of necessity be large, and involve great labor. There was a time when a comparatively small book could contain all the useful knowledge in connection with medicine, but that time has passed, and the vast amount of labor performed by thousands of earnest investigators in modern times has brought to light things and conditions which had to be named in order that they might exist in medical history. Each branch of medicine had its vocabulary, its book of definitions: but no encyclopedic medical dictionary, embracing all of the sciences, existed until Foster's appeared. In the preface to the first volume Foster says: "The time was when almost all important medical writing was in Latin; hence the older medical dictionaries dealt for the most part with Latin terms only. But the science of the present age is recorded in no one language; to learn it, one must at least read its exposition in English, French and German. Each of these languages has its technical words, and words which acquire a special meaning in technical expressions, and it is only with difficulty, if at all, that their meaning can be made out from general dictionaries. This fact points to the need of a medical dictionary including

the terms of the three languages mentioned, as well as those of Latin or Greek origin or form. The want seems to have been recognized by Littré and Robin, as is shown by the brief Greek, Latin, German, English, Italian and Spanish vocabularies appended to their revision of Nysten's '*Dictionnaire de Médecine*.' It was more fully, but still insufficiently, met in Palmer's '*Pentaglot Dictionary*.' A comprehensive medical dictionary giving adequate attention to English, French and German terms in the same vocabulary has not hitherto been published. To make such a dictionary, and at the same time one founded as far as possible on independent reading, was the leading idea on which the present work was undertaken."

Even the most cursory glance at the pages of either of the published volumes will show how fully the plans of the editor have been carried out. Take the word *contraction*, for instance; a whole column is devoted to definitions of the word *contraction* and its compounds; furthermore, every shade of meaning is translated into French and German. Under the German term *darm* (intestine), there are 192 definitions, embracing every possible shade of meaning, and so on throughout the whole volume.

To the physician who would keep pace with medical progress, a polyglot dictionary is indispensable. When the remaining two volumes of Foster's dictionary shall be completed the needs of advanced medical men will be fully supplied in this respect and medical literature will be enriched with a work that reflects great credit upon American medical men and upon the enterprise and liberality of American publishers.

It is with pleasure that we notice the name of our esteemed confrère, Dr. Wm. C. Ayres, in the list of collaborators of this great work.

A. McS.

#### PUBLICATIONS RECEIVED.

Vital statistics of the Jews in the United States. Census Bulletin No. 19.

Klinisch-experimentelle Studien über chirurgische Infektionskrankheiten. Von Dr. Julius Fessler, I. assistent der Kgl. Chirurgischen Universitäts-Klinik unter weil. J. Prof. Nussbaum, etc.

Antisepsis, and Asepsis before and after major gynecological operations. By Howard A. Kelly, M. D.

Removal of Tonsillar Hypertrophy by electro-cautery dissection. By Edward Pynchon, M. D.

How to obtain a Board of Health System for Texas. By J. L. Cunningham, M. D., Fort Worth Texas.

Transactions of the American Gynecological Society. Volume 15. For the year 1890. Philadelphia: Wm. J. Dornan, 1890.

Transactions of the American Orthopedic Association. Fourth session. Held at Philadelphia, Pa., September 16, 17, and 18, 1890. Vol. III.

Annual Report of the Postmaster General of the United States for the Fiscal Year ending June 30 1890.

Paranephric Cysts. By Robert Abbe, M. D.

A Rare Form of Intestinal Strangulation by a Band. By Robert Abbe, M. D.

Discussion on Craniotomy. Reprinted from the Transactions of the American Association of Obstetricians and Gynecologists, September, 1889.

Zur Ichthyol-Behandlung von Frauenkrankheiten. Von Dr. Reitmann and Dr. Schönauer. Wien, 1890.

Field Hospital Service with the Army of the Potomac. By William Warren Potter, M. D.

A Dermoid Cyst of the Left Ovary. By William Warren Potter, M. D. Buffalo, N. Y.

The Abuse of a Great Charity. By George M. Gould, M. D. *Reprint.*

A New Plate for Intestinal Anastomosis, the Segmented Rubber Plate. By F. B. Robinson, B. S., M. D., Toledo, Ohio. *Reprint.*

Transactions of the American Dermatological Association at its Fourteenth Annual Meeting, September 2, 3 and 4, 1890.

Arztlicher Almanach. Enthaltend: Biographien und Porträts hervorragender Aerzte, etc. Herausgegeben von Med. Dr. Adolf Kállay. Wien, 1891.

## MEDICAL ITEMS.

### MANUFACTURING MUSEUM "FREAKS."

A recent Taliocotian operation in Detroit (whereby the missing scalp of one child is to be replaced by grafts from the back of another, the children remaining in apposition until the grafts are united) recalls the performances of Dr. Conquest and the "comprachicos," whom Victor Hugo has immortalized in "L'Homme Qui Rit." The artificial manufacture of "freaks" by these procedures, however, lasted much longer than Victor Hugo indicates in his quasi-historical remarks. In the early part of the present century, a Dr. Harper was detected in England in the manufacture of "freaks" for the English and continental market (*Chicago Medical Review*, Vol. III). He twisted a child's head in an apparatus devised by himself, so that it would look permanently over one shoulder. He grafted a rat's tail on a child's nose. He manufactured "double monsters" by removing from the backs of two children slips of flesh and allowing the wounds to cicatrize together. After the children recovered, they were taught music, dancing, French and Italian. He was particularly strict about their observance of the Sabbath. He had a regular catalogue of prices to showmen, who were allowed a discount when the subject was furnished.—*Chicago Medical Standard*, December 1, 1890.



## MORTUARY REPORT OF NEW ORLEANS.

FOR JANUARY, 1891.

| CAUSE.                       | White | Colored | Male | Female | Adults | Children | Total |
|------------------------------|-------|---------|------|--------|--------|----------|-------|
| Fever, Yellow                |       |         |      |        |        |          |       |
| “ Malarial (unclassified)    | 4     | 4       | 3    | 5      | 5      | 3        | 8     |
| “ Intermittent               |       |         |      |        |        |          |       |
| “ Remittent                  | 3     | 1       | 4    |        | 4      |          | 4     |
| “ Congestive                 | 1     | 2       | 3    |        | 3      |          | 3     |
| “ Typho-Malarial             | 3     |         | 2    | 1      | 1      | 2        | 3     |
| “ Typhoid or Enteric         | 3     | 2       | 5    |        | 4      | 1        | 5     |
| “ Puerperal                  | 1     |         |      | 1      | 1      |          | 1     |
| Scarlatina                   |       |         |      |        |        |          |       |
| Small-pox                    |       |         |      |        |        |          |       |
| Measles                      | 4     |         | 2    | 2      |        | 4        | 4     |
| Diphtheria                   | 4     |         | 3    | 1      |        | 4        | 4     |
| Whooping Cough               |       |         |      |        |        |          |       |
| Meningitis                   | 5     | 1       | 3    | 3      | 2      | 4        | 6     |
| Pneumonia                    | 54    | 36      | 44   | 46     | 71     | 19       | 90    |
| Bronchitis                   | 25    | 6       | 17   | 14     | 17     | 14       | 31    |
| Consumption                  | 62    | 39      | 56   | 45     | 97     | 4        | 101   |
| Cancer                       | 6     | 3       | 1    | 8      | 9      |          | 9     |
| Congestion of Brain          | 9     | 5       | 9    | 5      | 9      | 5        | 14    |
| Bright's Disease (Nephritis) | 14    | 7       | 14   | 7      | 21     |          | 21    |
| Diarrhœa (Enteritis)         | 21    | 7       | 18   | 10     | 21     | 7        | 28    |
| Cholera Infantum             |       | 1       | 1    |        |        | 1        | 1     |
| Dysentery                    | 3     | 4       | 5    | 2      | 6      | 1        | 7     |
| Debility, General            | 5     | 4       | 3    | 6      | 9      |          | 9     |
| “ Senile                     | 19    | 10      | 12   | 17     | 29     |          | 29    |
| “ Infantile                  | 3     | 1       | 1    | 3      |        | 4        | 4     |
| All other causes             | 220   | 96      | 164  | 152    | 249    | 67       | 316   |
| TOTAL                        | 469   | 229     | 370  | 328    | 558    | 140      | 698   |

Still-born Children—White, 27; colored, 18; total, 45.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 30.50; colored, 39.53; total, 32.98.

## DIPHTHERIA RECORD FOR JANUARY, 1891.

| District. | CASES. |          |        | District. | DEATHS. |          |        |
|-----------|--------|----------|--------|-----------|---------|----------|--------|
|           | White. | Colored. | Total. |           | White.  | Colored. | Total. |
| 1         |        |          |        | 1         |         |          |        |
| 2         | 2      |          | 2      | 2         | 2       |          | 2      |
| 3         | 2      |          | 2      | 3         |         |          |        |
| 4         | 2      |          | 2      | 4         | 1       |          | 1      |
| 5         |        |          |        | 5         |         |          |        |
| 6         | 5      |          | 5      | 6         | 1       |          | 1      |
| 7         |        |          |        | 7         |         |          |        |
| II        |        |          | II     |           | 4       |          | 4      |

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

## METEOROLOGICAL SUMMARY—JANUARY.

STATION—NEW ORLEANS.

| Date..... | TEMPERATURE. |      |      | Precipn. in<br>inches and<br>hundredths.. | SUMMARY.                                                          |
|-----------|--------------|------|------|-------------------------------------------|-------------------------------------------------------------------|
|           | Mean         | Max. | Min. |                                           |                                                                   |
| 1         | 65           | 70   | 60   | .04                                       | Mean barometer, 30.143.                                           |
| 2         | 49           | 54   | 44   | 0                                         | Highest barometer, 30.478, 19th.                                  |
| 3         | 48           | 55   | 40   | 0                                         | Lowest barometer, 29.706, 10th.                                   |
| 4         | 48           | 57   | 40   | 0                                         | Mean temperature, 53.2.                                           |
| 5         | 56           | 65   | 46   | 0                                         | Highest temperature, 77, 31st; lowest, 32, 13th.                  |
| 6         | 56           | 66   | 46   | 0                                         | Greatest daily range of temperature, 21, 15th.                    |
| 7         | 59           | 65   | 53   | 0                                         | Least daily range of temperature, 4, 9th.                         |
| 8         | 62           | 66   | 57   | .54                                       | MEAN TEMPERATURE FOR THIS MONTH IN—                               |
| 9         | 56           | 58   | 54   | .20                                       | 1871.... 53.6    1876.... 60.3    1881.... 50.3    1886.... 45.5  |
| 10        | 53           | 58   | 48   | .16                                       | 1872.... 48.1    1877.... 53.5    1882.... 62.4    1887.... 51.4  |
| 11        | 48           | 52   | 44   | .03                                       | 1873.... 40.3    1878.... 50.9    1883.... 56.8    1888.... 55.0  |
| 12        | 43           | 47   | 39   | 0                                         | 1874.... 55.8    1879.... 53.1    1884.... 47.1    1889.... 53.4  |
| 13        | 40           | 47   | 32   | 0                                         | 1875.... 54.3    1880.... 63.0    1885.... 52.1    1890.... 63.1  |
| 14        | 44           | 53   | 36   | 0                                         | 1891.... 53.2                                                     |
| 15        | 54           | 65   | 44   | .54                                       | Total deficiency in temp'ture during month, 17.                   |
| 16        | 47           | 50   | 44   | 0                                         | Total excess in temp'ture since Jan. 1, 17.                       |
| 17        | 46           | 50   | 42   | 0                                         | Prevailing direction of wind, S. E.                               |
| 18        | 47           | 54   | 40   | 0                                         | Total movement of wind, 6,923 miles.                              |
| 19        | 46           | 56   | 37   | 0                                         | Extreme velocity of wind, direction, and date,                    |
| 20        | 54           | 62   | 45   | 0                                         | 40 miles, N. W., 24th                                             |
| 21        | 57           | 63   | 51   | .12                                       | Total precipitation, 3.75 inches.                                 |
| 22        | 49           | 58   | 40   | 0                                         | Number of days on which .01 inch or more of                       |
| 23        | 50           | 58   | 43   | .01                                       | precipitation fell, 11.                                           |
| 24        | 46           | 51   | 41   | .36                                       | TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)                    |
| 25        | 50           | 57   | 42   | 0                                         | FOR THIS MONTH IN—                                                |
| 26        | 52           | 61   | 42   | 0                                         | 1871.... 6.75    1876.... 4.43    1881.... 11.15    1886.... 7.53 |
| 27        | 54           | 60   | 48   | .36                                       | 1872.... 5.10    1877.... 5.30    1882.... 4.54    1887.... 4.26  |
| 28        | 62           | 71   | 54   | 1.39                                      | 1873.... 5.06    1878.... 5.36    1883.... 10.63    1888.... 3.20 |
| 29        | 70           | 76   | 63   | T                                         | 1874.... 1.68    1879.... 2.34    1884.... 4.35    1889.... 6.51  |
| 30        | 70           | 76   | 64   | 0                                         | 1875.... 8.44    1880.... 1.02    1885.... 9.70    1890.... 0.66  |
| 31        | 71           | 77   | 65   | T                                         | 1891.... 3.75                                                     |
|           |              |      |      |                                           | Total deficiency in precip'n during month, 1.65.                  |
|           |              |      |      |                                           | Total deficiency in precip'n since Jan. 1, 1.65.                  |
|           |              |      |      |                                           | Number of clear days, —; partly cloudy days,                      |
|           |              |      |      |                                           | —; cloudy days, —.                                                |
|           |              |      |      |                                           | Dates of Frost, 4th, 6th, 13th, 14th and 19th.                    |
|           |              |      |      |                                           | Mean maximum temperature, 59.9.                                   |
|           |              |      |      |                                           | Mean minimum temperature, 46.6.                                   |

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, *Sergeant, Signal Corps Observer.*

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**MARCH, 1891.**

VOL. XVIII.  
No. 9.

## INDEX TO ADVERTISEMENTS.

### PAGE.

|                                             |    |
|---------------------------------------------|----|
| Arlington Chemical Co.....                  | 14 |
| Baker's Breakfast Cocoa.....                | 30 |
| Baker & Co., Jno. C.....                    | 20 |
| Baltimore Medical College.....              | 18 |
| Battle & Co.....                            | 13 |
| Bellevue Hospital Medical College.....      | 30 |
| Boehringer & Soehne.....                    | 10 |
| Bowden Lithia Springs Co.....               | 25 |
| California Fig Syrup.....                   | 11 |
| Celerina.....                               | 21 |
| Cerebro-Spinant—I. O. Woodruff & Co.....    | 23 |
| Claudel, Optician.....                      | 18 |
| Cook, Gus.....                              | 18 |
| Diocuburnia.....                            | 27 |
| Ford's Digestive Tablets.....               | 29 |
| Health Restorative Co.....                  | 4  |
| Herrick Uterine Supporter.....              | 18 |
| Kentucky School of Medicine.....            | 18 |
| Maline.....                                 | 8  |
| Marchand's Peroxide of Hydrogen.....        | 32 |
| Mariani & Co.....                           | 18 |
| Martin's Vaccine Virus.....                 | 18 |
| McDermott, A.....                           | 15 |
| Medical Dep't of the Tulane University..... | 15 |
| Mellins Infants Food.....                   | 1  |
| Moore McGregor Medication.....              | 18 |
| New York Medical Journal.....               | 19 |

### PAGE

|                                          |    |
|------------------------------------------|----|
| N. Y. Pharmaceutical Co.....             | 6  |
| N. Y. Post-Graduate Medical College..... | 22 |
| Peacock's Bromides.....                  | 24 |
| Pomerox Truss Co.....                    | 30 |
| Planton's Capsules.....                  | 15 |
| Reed & Carnrick.....                     | 20 |
| Robinson-Pettet Co.....                  | 2  |
| "Sanitas" Antiseptics, etc.....          | 1  |
| Schieffelin & Co., W. H.....             | 3  |
| Sharp & Dohme.....                       | 16 |
| Swain's Rectal Instruments.....          | 20 |
| Tarrant & Co.....                        | 17 |
| Tasteless Quinine.....                   | 15 |
| The New Orleans Polyclinic.....          | 28 |
| The Wm S. Merrell Chemical Co.....       | 9  |
| The R. Hyde Co.....                      | 24 |
| University of Wooster, Medical Dept..... | 31 |
| Wagner Medical Manufacturing Co.....     | 7  |
| Wayne's Diuretic Elixir.....             | 12 |
| Wheeler's Tissue Phosphates.....         | 15 |

### COVER.

|                               |   |
|-------------------------------|---|
| Antikannia.....               | 3 |
| Fairchild Bros. & Foster..... | 2 |
| Fellows, James I.....         | 4 |
| Sharp & Dohme—Chemists.....   | 2 |

**N. B.** Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

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## OUR APRIL ISSUE

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NEW SERIES.

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WHOLE No. 316.

No. 10.

*Pauillum sepulta distat inertia  
Celata virtus.*—HORACE

The

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### TABLE OF CONTENTS.

| PAGE.                                                                                                    | PAGE. |
|----------------------------------------------------------------------------------------------------------|-------|
| Suggestions on the Pathology and Treatment of Locomotor Ataxia—By D. R. Brower, M. D. Chicago, Ill. .... | 741   |
| Some Observations on the use of Fuchsine in the Treatment of Cancer—By Isadore Dyer, M. D., .....        | 746   |
| Gynecological Society of Chicago. ....                                                                   | 749   |
| Clinical Lecture on Diseases of the Skin. ....                                                           | 759   |
| Meeting of the National Association of Railway Surgeons .....                                            | 764   |
| Correspondence .....                                                                                     | 765   |
| An Improved Method of Treating Diphtheria .....                                                          | 767   |
| Enriched Resource—Dr. Jos. Jones and the Koch Liquid.....                                                | 770   |
| The Virchow Testimonial.....                                                                             | 772   |
| A Note on Koch's Treatment.....                                                                          | 773   |
| Medicine.....                                                                                            | 775   |
| Laryngology, Otology and Rhinology .....                                                                 | 783   |
| Dermatology and Hygiene .....                                                                            | 789   |
| Gynecology .....                                                                                         | 793   |
| Book Reviews and Notices .....                                                                           | 804   |
| Publications received.....                                                                               | 805   |
| Medical Items .....                                                                                      | 807   |
| Mortuary Report—February, 1891 .....                                                                     | 810   |
| Meteorological Summary, February, 1891 .....                                                             | 817   |
| Publishers' Department .....                                                                             | 818   |

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# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XVIII.

APRIL, 1891.

No. 10.

## ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

### SUGGESTIONS ON THE PATHOLOGY AND TREATMENT OF LOCOMOTOR ATAXIA.\*

By DANIEL R. BROWER, M. D., CHICAGO, ILL.,

Professor of Diseases of the Nervous System, Didactic and Clinical, in the Woman's Medical College; Professor of Mental Diseases and Lecturer on the Practice of Medicine in Rush Medical College, Chicago, Ill.

Considerable has appeared in the literature of the profession for the last few years on the cerebral complications of locomotor ataxia, and the cerebral symptoms in some cases of this disease are so striking as to raise the question as to whether or not some cases at least are not in their beginning posterior spinal sclerosis. Especially are these cerebral symptoms in such cases manifested in the pre-ataxic stage. Indeed, the diagnosis of the pre-ataxic stage largely depends upon the presence of these cerebral symptoms. The disturbance in pupillary reflex; the inequality of the pupils; the contracted pupils; the deformity of the pupil, its circular form being converted into an elliptical contour; the transient attacks of diplopia; atrophy of the optic nerve; the deafness in some cases, sudden or gradual in its onset, temporary or permanent; the persistent deafness being attributed by some to an atrophy of the auditory nerve similar to that of the optic nerve, certainly can have no direct connection with a disease

\*Abstract of a paper read before the International Medical Congress.



that has its beginning in the posterior columns of the spinal cord. Then, again, the visual color changes; the color blindness; the inability to appreciate red and green or to carefully discriminate between gray and black: the trigeminal involvement, etc.

Bernard reports the case of a tabetic patient who had peculiar symptoms referable to the involvement of the ascending root of the trigeminus, viz: a sensation as if the face were swollen, particularly the lips, drinking from a cup being difficult from his not appreciating the portion of the cup touching the lips. Speech was also interfered with through imperfect action of the lips due to sensory impairment.

The cases reported by J. C. Shaw of apoplecticiform, epilepticiform and hemi-paretic attacks in locomotor ataxia, and the similar cases which have come under the observation of almost every one whose experience with this disease has been at all extensive, would at least prove that other parts of the nervous system are seriously impaired in posterior spinal sclerosis. Then, in this connection, it must not be overlooked that there is a more or less intimate relation between posterior spinal sclerosis and general paralysis of the insane. Again, the mental disturbance, the variation in the emotions, the not uncommon defect in the intellect, the mental depression, the headaches, vertigo, and insomnia would all seem to be symptoms of a disease that had at least a part, and very important part, of its pathological history within the intra-cranial cavity, as well as the unilateral atrophy of the tongue, the affections of the laryngeal muscles and of the vocal cords. On the other hand, there are cases of locomotor ataxia that have their origin in the peripheral nervous system. A number of cases have occurred in my own experience that seem to me to be clearly due to gunshot and other injuries of the peripheral nerves of the lower extremities. Spillman and Parisot have analyzed fourteen cases of posterior spinal sclerosis associated with peripheral injuries of various kinds, and reach the conclusion that where there is a neurotic predisposition, individual or hereditary, a traumatism of even slight degree may be the exciting cause.

Nonné describes cases of involvement of the peripheral

nerves which developed during the course of locomotor ataxia; neuritis of the nerves of the small hand-muscles with atrophy and reaction of degeneration; musculo-spiral paralysis with reaction of degeneration; transitory paresis of the peronei, and partial degeneration of small hand-muscles. J. C. Shaw reports similar cases. Dejenirine found in 12 out of 106 cases important changes in the peripheral nerves, and in some of these cases the spinal cord was normal.

Langenbeck, who has expressed the opinion that tabes dorsalis is frequently of peripheral origin, reports the case of a man of 40 who was admitted into the hospital suffering from the typical symptoms of this disease. There was anæsthesia of the feet; marked ataxic gait; incoördination of the upper extremities; constrictive or girdle bands; absence of patellar-tendon reflex, and there were severe shooting pains in the limbs, especially in the legs. The left sciatic nerve was stretched, and on examination it appeared abnormal, red and swollen; the operation was followed by temporary paralysis of motion and sensation, but the pain was much lessened. Twelve days later the other sciatic and both crural nerves were stretched, and as a result of this operation the patient was entirely and apparently permanently cured of the pains, anæsthesia, ataxia, so that he was able to walk easily. The pains in the upper extremities continued, and for their relief it was proposed some months later to stretch the axillary nerves. The patient died suddenly from chloroform narcosis before the operation was performed. The spinal cord was examined by Dr. Westphal and found to be quite normal, here showing a case of locomotor ataxia that was not posterior spinal sclerosis, but that was due to a disturbance of nutrition of the peripheral nerves, so that we must divide the disease we call locomotor ataxia into at least three types, viz: *locomotor ataxia cerebral*, *locomotor ataxia spinal*, and *locomotor ataxia peripheral*, according as it has its beginning in the brain, the spinal cord, or in the peripheral nervous system. And these distinctions are absolutely necessary in order that the treatment employed may be scientific in its direction, a cerebral disease certainly requiring a different treatment from a spinal, and a peripheral disease a treatment different from either.

The differentiation of these three forms of locomotor ataxia may not be easy, but certainly in some cases it is possible. The great preponderance of cerebral symptoms in the first form, and the preponderance of those symptoms that belong to neuritis, such as pain and tenderness in the course of the nerve, sensitiveness of muscles, the wasting of muscles; various trophic changes in skin, nails and hair; the œdema and excessive sweating will often serve to differentiate the third form.

In the matter of treatment of locomotor ataxia, if the diagnosis is made early in any one of these several forms, prolonged rest in bed should be an important element, and all mental work and anxiety should be regarded as highly dangerous, especially in the cerebral form; for certainly the parts of the nervous system that are involved at the beginning of these several processes should be put in a state of rest as near absolute as possible. This is true of every other kind of inflammatory disturbance, and why not of the disturbances that belong to locomotor ataxia in its several forms?

The etiological relation of syphilis, rheumatism and of gout should be recognized and appropriate treatment, such as is indicated for these three kinds of nutritive disturbances, should be employed. Special attention should be paid to the condition of the digestive system; the entire alimentary tract should be as far as possible put in order and kept in order. Tobacco and alcohol, except in the most moderate quantities, will do harm: and excessive sexual indulgence is most injurious.

In the cerebral form of the disease the new treatment by suspension is likely to be beneficial. In the other forms of the disease I question very much whether any advantage will come from its use; but I have no hesitation in certifying to its great benefit in these cases, especially in the early stages, where the cerebral symptoms predominate; and I believe that in the peripheral cases nerve-stretching can be used with great benefit.

Dr. Bowlby, in his admirable book on "Injuries and Diseases of Nerves and their Surgical Treatment," certainly records enough cases to satisfy almost any one that sometimes, at



least, great advantage comes to the tabetic patients from nerve-stretching, and I think it will be found that only in those cases that are peripheral in their origin will this method of treatment be of any special service. While on the subject of nerve-stretching, I direct the attention of the profession to a modification of the ordinary apparatus, by which extension can be made in the recumbent posture, devised by Dr. Chas. F. Stillman, of Chicago.\*

In the matter of drugs in the treatment of locomotor ataxia alteratives deserve the first place, and of these may be mentioned *liquor arsenici et hydrargyri iodidi* in about three-drop doses, well diluted, thus combining the alterative and tonic properties of arsenic, iodine and mercury. Nitrate of silver administered in capsule form rubbed up with cosmoline to the extent of a third of a grain, three times a day, for a period of not longer than two months, after the arsenic course, will sometime improve the condition of the patient. Phosphorus, either the phosphide of zinc or as the elixir of phosphorus, or as the pill of phosphorus, in gradually increasing doses, carefully watching the urine for evidences of irritation of the kidney, is also often of benefit in these cases. In the early stages of the cases, and in the sudden onset or acute exacerbation of the symptoms, ergot can be used with advantage. Counter-irritation of the spine and of the lower extremities by the actual cautery is useful in many cases, and cupping of the spine, and where the disease is of peripheral origin, cupping the lower extremities is beneficial.

The use of electricity by the method of general galvanization and the faradization of the skin with the wire brush is also of great advantage in some cases. The severe pains with which the disease is so often accompanied sometimes only yield to hypodermic injections of morphia, but may often be relieved by the new analgesics, especially phenacetine and acetanilid.

The bladder should claim attention throughout the history of the disease, and if the patient is unable thoroughly to empty it, the catheter should be passed and the bladder frequently washed out in order to avoid extension of the inflammation from this organ to the kidneys.

\*See Transactions Chicago Medical Society, December 2, 1889.

SOME OBSERVATIONS ON THE USE OF FUCHSINE IN THE  
TREATMENT OF CANCER.

By ISADORE DYER, M. D.,

Assistant Resident Physician New York Skin and Cancer Hospital, Country Branch,  
Fordham Heights, N. Y.

In a December number of the *New York Medical Record* there appeared a report on the use of fuchsine in the treatment of ulcers of the leg. In our wards we had one such case, of sixteen years standing, in which various remedies had been tried with no success. On December 26, 1890, an application was made of a solution of fuchsine in alcohol (3 gr. to 4 oz.) The application was made on cotton, saturated with the fluid, and then a final bandage applied. On the third day the dressings were removed. There was a marked change. There was little discharge; the inflamed area around the ulcer had disappeared, and patient stated that there was no longer any pain present. The strength was increased on January 3, to 10 gr. 4 oz., and applied as before. The rest of the case is briefly told. At the end of five and a half weeks from beginning of treatment the wound had entirely healed.

Close observation of the phenomena attending the above case led Dr. Ames C. Lewis, the resident physician of the Country Branch of the New York Skin and Cancer Hospital, and myself to the opinion that fuchsine might have some effect upon our several cancer cases. Accordingly we began a series of experiments. A better understanding will be obtained if a resumé of each case be given.

CASE I.—M. S., woman, aged 69; carcinoma cutis, of eight years' standing, situated on right side of chest, extending from right border of sternum into the axillary region. The right breast has been destroyed. The disease is characterized by appearance of nodules of varying size. These break down and leave an ulcerating mass. Fuchsine treatment was begun on January 5, 1891. At this time the wound discharged freely a fluid of foul odor. The whole mass was painful and required light dressing. Patient complained of frequent lancinating pains. To upper right surface of wound fuchsine solution was applied. A solution of fuchsine (gr. 3)

and alcohol and water (oz. 3.2) was used, applied on cotton as in the other case. Not until January 26 was any marked change observed. At this time it was noticed that the wound was dryer than before and that the odor of discharge was much less offensive. At several points there was a tendency to heal. Patient stated that the pain was wholly absent, excepting at times of dressing. At this writing, February 25, the condition of the growth is as follows:

In size, reduced one-fourth; discharge slight and odor marked, but no longer foul; pain almost wholly absent. At several points on the surface of the wound there are spots which have healed. There has been no advance of the disease in any direction since the treatment was begun.

CASE II.—G. B., man, aged 71; epithelioma faciei, of six and a half years' standing. The nose has been entirely destroyed. The wound in area covers the space between the eyes and extends down to upper lip on either side of face, along a line drawn from inner third of lower lid to the upper lip. On January 6, 1891, fuchsine (gr. 3) in alcohol (oz. 4) was applied to the left marginal portion of diseased surface. In a few days the change was marked. The entire surface was covered with cotton saturated with the solution. On January 11, the dressing was discontinued, as it proved painful. On January 16, a stronger solution (gr. 10, oz. 4) was applied. On January 31, patient appeared to suffer after dressing was applied. The fuchsine was prepared in lanoline (gr. 5 to oz. 2) and the ointment applied directly to surface and lightly protected with lint. The pain was much relieved after first dressing. At this writing, February 25, the following points in the case are to be noted:

1. The inflammation and induration just at margin of wound have been dissipated.
2. There is very little discharge.
3. The surface of the wound itself is far less inflamed, and at points shows signs of healthy granulation.
4. The pain incident to either application was probably due to the alcohol.
5. The advance of the disease has been only slight, that



at only one point, and it is less than it has made in any similar period of time in two years past.

CASE III.—P. T., man, aged 70; sarcoma capitis et faciei, of ten months' standing. The diseased mass covered the front and anterior side of head, extending down on face to a line drawn in continuation of left lower eyelid to the tragus.

The whole was highly inflamed and much swollen, and presented a large ulcerating surface in the center. There was a continuous discharge, watery and inodorous in character. Patient was only under treatment for three days. Fuchsine (5 gr.) in lanoline (2 oz.) was applied and the dressing changed once a day. In that short space of time the inflammation was very much reduced, the discharge lessened and the man relieved. The swelling was not affected.

CASE IV.—In one other case—of extensive epithelioma of the face, involving the whole frontal region, both eyes, and the nose—only a small portion of growth was treated. At upper margin of the growth the alcoholic solution (gr. 10 to oz. 4) was applied on cotton as above. A portion of this surface treated was healed, in size about one inch long and one-eighth of an inch wide. The importance of these experiments, limited as they are, seems to me sufficient reason for the publication of the above results.

It will be observed that in these cases, fuchsine fulfils various indications, viz :

1. An antiseptic.
2. A stimulant.
3. An anæsthetic.
4. Deodorizer.
5. Reduces inflammation.
6. Astringent.

—all important factors in the treatment of chronic ulcerating lesions. If it is possible to cure or check cancer, any means helping to that end will certainly avail something. If a cure results, a wedge is started in a much needed field of inquiry.

## PROCEEDINGS OF SOCIETIES.

## GYNECOLOGICAL SOCIETY, CHICAGO.

THE REMOTE RESULTS OF SHORTENING THE ROUND LIGAMENTS  
FOR UTERINE DISPLACEMENTS BY THE NEW DIRECT METHOD.

By HENRY P. NEWMAN, M. D.,

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Gynecologist, Charity Hospital, Chicago Public Dispensary, etc.

At the September meeting, 1888, I presented to this Society a new method of shortening the round ligaments for uterine displacements, and reported seven consecutive cases, five of which were operated upon according to this method. In the first two cases I adhered carefully to the original technique of Alexander, in which the primary incision is made directly over the spine of the pubes, an inch and a half or more in length, upward and outward along the course of the inguinal canal. By subsequent dissections through the subcutaneous adipose tissue and fascia, the wound is deepened until the aponeurosis of the external oblique muscle is exposed. As simple as this would seem, Alexander says of this first step: "In its performance many failures have occurred. Half way through the fatty tissue, especially in stout subjects, a thick aponeurosis is met with which simulates in appearance the aponeurosis of the external oblique. Here many operators stop and search for the ligament in some round aperture that looks like a ring. Some find out their mistake when, in scratching about, the true aponeurosis accidentally comes into view."

After further admitting that the end of the ligament may be thus teased away unrecognized and the wound unwarrantably deepened, he goes on to give explicit directions for avoiding such unfortunate accidents. That these are inadequate and unsatisfactory may be inferred from the published reports of some prominent operators, who, in following his instructions, have at times wholly failed to find the round ligaments.

Granted this initial step to have been successfully performed, the fascia covering the external ring is next cut through, and the round ligament, if seen, seized and raised out of the inguinal canal with a pair of dissecting forceps. Often, however, this portion of the ligament is so lost and obscured, in the surrounding fat, muscular and connective tissue, that the

entire contents of the canal must be pulled out *en masse*, spread over the finger, and its isolation accomplished by tedious dissection.

It is at this point, in the old operation, that the greatest disadvantages arise, for it is here that the fibers of the ligament diverge in various directions, some to become imbedded in the surrounding tissues of the inguinal canal, others to be attached to the pubic spine, and a few to find their way down to the vulva and terminate in the labium majus. Hence the difficulty, in its frayed and attenuated condition, of picking up a satisfactory and strong ligament. Add to this the probability of rupturing the weakened ligament by the undue force necessary to drag it through the ring at an acute angle with its abdominal course (an accident which Mundé confesses to have happened to him three times), and you have in substance the factors which have militated against the general acceptance and usefulness of a valuable operation.

That the fault does not lie in the theory of Alexander, but in the technique of its application, is apparent from the experience of other operators. Dr. J. A. Adams, of Glasgow, whose name is associated with that of Alexander in first suggesting the operation, says of the experience of pioneer operators abroad: "The operation is one that all and sundry can not perform," and adds: "It is amusing to hear otherwise well-qualified obstetric and general surgeons condemning the operation because they consider the round ligaments to be mythical structures, or because they have pulled out something and passed a few sutures through it."

Among our own surgeons there are those sufficiently candid to acknowledge that their early failures were not due to the absence of round ligaments in their patients. Dr. Mundé, in the November number of the *American Journal of Obstetrics*, 1888, says, in referring to previous publications of his: "In these articles I felt justified in commending the principle of the operation, but doubted whether it would always be practicable, owing to the difficulty at times of finding the ligaments. Since then my increased experience with the operation leads me to modify the last part of this statement, for I now believe that my failure to find the ligaments at all in my third, and on one side in my second case, was my fault, and was due to my not recognizing the exact anatomical landmarks indispensable to the easy seizure of the diffuse terminal portion of the ligaments." Other and similar testimony might be quoted to the point, but in this brief paper we will be content with these two eminent authorities.

I wish to call attention again to the method of operating



which I brought before the profession in my paper upward of two years ago.

I do this for two reasons: First, I can now speak with the utmost confidence of its practical utility and the permanence of its successful results; and, second, many of its distinguishing features have been appropriated by other operators, notably Dr. G. M. Edebohls, of New York, who presented at the tenth international congress at Berlin a very creditable resumé of the operation. While I congratulate the doctor on the very able manner in which he brought it to the notice of the foreign medical profession, I would remind him that a priority of about a year and a half of practical demonstration belongs to Chicago.

As I stated in my previous paper, the operation was first suggested by Dr. J. Frank, of this city, and, after its utility had been demonstrated on the cadaver, first performed on the living subject in No. 3 of my reported cases.

I propose to call this the direct method from the following distinctive advantages:

1. The single sweep or two with which we cut down upon the inguinal canal or the glistening aponeurosis of the transversalis muscle, directly over the internal ring, or canal of Nuck.

2. Through a single nick in the course of the separated fibers of this aponeurosis the blunt hook may often be passed into the canal and the round ligament pulled out in less time than it takes to tell it; or, by lengthening the incision, it may be exposed along the canal in its entirety.

3. There can be no doubt here of the identity of the ligament, as a duplication of the peritoneum is seen surrounding it at its abdominal extremity.

4. The force used in pulling out the ligament is both brought to bear upon it at its strongest portion and is in a direct line with its intra-abdominal course. This in strong contrast to the old mode of pulling upon its frayed-out terminal fibers at an acute angle with its inner and stronger portion and over the sharp, resisting surface of the ring.

5. Aided by the sense of sight, and seizing the ligament above the inguinal canal, we can feel assured that we are drawing upon the abdominal portion of the ligament, and not merely stretching its inguinal action.

6. As there are few or no adhesions at this portion, there should be absolutely no teasing of the tissues. Consequently, where aseptic methods are used, there should always be healing by first intention, and drainage and after-treatment be relatively simplified.

7. Where the ligament is strong and well developed, as it is in the upper portion, it can be more securely anchored or made fast to the surrounding tissues.

8. Hernia is guarded against by deep sutures constricting the canal about the internal ring, insuring firm union where most needed.

9. The intercolumnar fibers and tissues about the external ring are not interfered with or irritated in any way.

Inasmuch as many of the abdominal muscles have fibers converging about the pillars of the external inguinal ring, movements of the body often create disagreeable tension and cause pain in a wound situated here, and I have observed these distressing symptoms to continue for weeks afterward. I attribute their absence in my later cases to the fact of avoiding these sensitive areas and minimizing mutilation by the higher incision.

Since time is an important consideration in judging of the success or failure of this operation, I have purposely reported to-night only those cases in which the round ligaments were shortened upward of two years ago.

CASE I.—Mrs. L., age 33, married twelve years, has one child 10 years old; has suffered much pain at the menstrual period for many years, being scarcely ever free from distress in the pelvic organs.

During the last year she has been troubled with menorrhagia and metrorrhagia, and upon introduction of the sound bleeding is invariably excited. Examination showed the uterus large, prolapsed, and retroverted, cervix and perineum torn. This patient was sent to me by a physician in Central Nebraska in whom I had great confidence, and who had had her under treatment during the greater part of the previous two years.

March 14 I curetted the uterus for vegetations, removing a large quantity. As the wool vaginal tampon, persistently used since February 26, had little effect in restoring the prolapsed and retroverted uterus, and as a pessary could not be tolerated, I performed Alexander's operation April 21, with the assistance of Dr. Henry T. Byford.

The wound did well, and the patient was up and about at the end of the fourth week. In the ninth week, when she returned to her home in Nebraska, the uterus was held well forward and high up in the pelvis. August 1 of the same year she reported herself by letter in better health than she had been for years, and doing her own housework, which it had long been impossible for her to do. I learn through friends that she subsequently had a severe and exhausting

attack of typhoid fever, lying upon her back for five or six weeks.

It would seem reasonable that this should have some deleterious effect upon the uterine supports, but I learn from a letter received last spring that she was still enjoying good health, and had not required the services of any physician since the operation, nor had she been examined. This gave me no definite information as to the position of the uterus or condition of its supports, but from absence of symptoms it may be inferred that there has been no return of her former troubles and that cure has been effected.

CASE II.—Mrs. W., 35 years of age, has borne eight children and had two miscarriages; has been under local treatment constantly for two years, and has been more or less of an invalid for ten.

Uterus retroverted and strongly retroflexed, with some adhesions from former pelvic inflammations. Cervix and perineum were lacerated, and considerable pain was caused by attempts to replace the uterus.

February 6, 1888, the uterus was dilated for the purpose of straightening, and the lacerations of cervix and perineum were repaired by her physician, Dr. R. N. Hall. The flexion returned, her condition was not improved, and I was asked to do Alexander's operation.

May 31 the round ligaments were shortened about four inches, using the old method of operating. Some difficulty was experienced in picking up the ligaments, necessitating considerable disturbance of the tissues. There was sloughing of the wound in this case, referred partly to the teasing of the tissues, and partly to the patient herself, who tore away the dressings and infected the wound with her nails. She was an extremely nervous and unmanageable patient, and on June 19 left the hospital without the knowledge of her attending physician, who abandoned the case. Under the circumstances convalescence was tedious and protracted, and her former suffering was for a time enhanced. Dr. Saunier, who took charge of the case about a year and a half ago, says that the uterus at that time was held in good position, but considerable pain was experienced from tension upon old adhesions, resulting from pelvic inflammations prior to the operation. Pregnancy ensued, with relief from all her former symptoms. No difficulty was experienced at the birth of the child—a fine specimen about five months old—and she herself is strong and hearty, doing her own housework and presenting quite a plump and youthful appearance. Dr. Saunier says that at present the uterus is healthy and in its normal position.



CASE III.—Mrs. P., age 36 years, has suffered for eleven years from prolapsus procidentia of the uterus. ovaries large, tender, and prolapsed, so that a pessary was tolerated with difficulty. Was able to do little or nothing in the way of household duties, though the mother of a large family. Menses were irregular, profuse and painful. When first seen in May, the uterus was enlarged and heavy, appearing at the vulva, and the effort of straining or bearing down forced it out of the vaginal orifice. Vagina was capacious, and rectal and vesical walls greatly relaxed. She reported having been under local treatment by a prominent physician during the last two years, and that her condition had become worse rather than better. The operations of anterior and posterior colporrhaphy were advised, and a few weeks later performed with only partial relief. August 16, 1888, the round ligaments were shortened about four inches by the new or direct method. The wound healed promptly by first intention. In the fourth week patient was up and about, and left the hospital at the end of the fifth, feeling quite well, with the uterus in normal position. She was seen, six weeks after the operation, at her home, and expressed herself as still feeling quite well. Had little or no pain at the last menstrual period, and was engaged in light household occupation. Examination showed uterus held well up, and scarcely resting upon the Hodge pessary which she had been instructed to wear.

November 12, 1890, she came to my office at my request, and I made a careful examination. Instead of the former condition of procidentia, engorged, heavy and inflamed uterus, I found the uterus healthy, normal in size, measuring two and three-quarter inches in depth, and free from tenderness. The anterior and posterior vaginal walls were in apposition, and the former rectal and vesical symptoms had disappeared. In strong contrast to her former worn and anxious appearance and emaciated physique, she now presents a cheerful countenance, and claims to have gained fully thirty pounds in the past year and a half.

CASE IV.—Mrs. E., age 23, married four years; one child and two miscarriages. Has suffered three years with prolapsus and subinvolution following the birth of her child. She had also lacerated cervix and perineum, and suffered more or less pain, with constant dragging sensations, at the menses and during the entire month. Flow profuse, irregular, and followed by leucorrhœa; reflex symptoms were of great annoyance and not relieved by the usual remedies.

June 1, 1888, I operated upon the cervix and perineum, with only slight relief from the reflex symptoms. (The pre

vious treatment in this case, covering many months, consisted in the use of the vaginal wool tamponade and postural treatment, likewise without benefit.)

August 24, 1888, at St. Elizabeth's Hospital, I shortened the round ligaments by the direct method. (The operation was followed by no unpleasant symptoms, and at the end of the third week the patient was allowed to sit up, returning to her home at the end of the fourth. Five weeks after the operation she had none of the former distress in back and sides, dyspeptic symptoms rapidly disappearing. The uterus remained in excellent position and involution was taking place rapidly. This patient has been under observation since the operation, and her condition has been most gratifying, notwithstanding the exacting demands of a life of social and domestic responsibility.

In April, 1889, being in the third month of pregnancy, she overtaxed her strength in fitting up and moving into a new residence, and brought on a miscarriage.

She recovered, however, without any return of her pelvic ailments, and when last at my office, September 28, 1889, the uterus was normal in size, in excellent position, and the effects of the operation eminently successful.

CASE V.—Mrs. N., age 29, married eleven years; three children and two miscarriages. Nine years ago began to have backache and bearing-down pains. From year to year these have become worse, until she has become incapacitated from the performance of household duties.

When first examined, about January 1, 1888, the uterus was found heavy, prolapsed, and retroverted, cervix and perineum badly torn, both ovaries enlarged, prolapsed, and tender, so that no pessary could be endured.

In June, 1888, the double operation upon cervix and perineum was performed, and Alexander's operation on August 25, at her home. Though lacking conveniences and trained attendants, the patient's recovery was rapid and satisfactory, requiring but little more care and attention than an ordinary cervix and perineum operation.

In the fifth week after the operation I found the woman about the house and attending to her household duties, but exercising caution, as she had been strictly enjoined. The prolapsed and retroverted uterus, as well as the tender and enlarged ovaries, was now found drawn well up, the latter beyond reach of the finger. No pain was experienced, and patient felt herself recovered, though showing some anemia and weakness from confinement incident to the two operations and the result of her former condition.

November 20, 1888, this patient came to my office. The uterus in good position, but larger and heavier than normal, with some tenderness at site of the cutaneous incision and along the course of the newly attached ligaments. Close questioning brought out the fact that she had been exerting herself unduly in her domestic duties.

She was instructed to continue the use of the pessary and the abdominal support, and to persist in the postural treatment as long as tenderness continued, and to be more conservative of her newly acquired strength. These symptoms disappeared within the next few weeks; but whenever her ambition got the better of her good sense during the following six or eight months, she suffered a return of some of her minor symptoms.

November 12, 1890, she reports herself as feeling in the best of health, her general expression and appearance fully confirming her assertions. She is doing her own housework, and has done so since a few months after the operation. The uterus shows the slight increase in volume consequent upon having passed through years of chronic inflammation, but its internal measurements are only two and three-quarter inches; it is in normal position, and there is neither leucorrhea, menstrual derangement, nor any reflex symptom.

CASE VI.—Mr. G., age 34, married three years, and sterile; former occupation, laundress and seamstress; has suffered retroversion and prolapsus for fifteen years, with distressing pains in back, dysmenorrhea, and irregular menses followed by leucorrhea. She was treated for several months at the North Side Free Dispensary and at her own urgent request Alexander's operation was done at the Polyclinic Hospital, August 27, 1888. In this case the healing was so prompt, that, being obliged to leave the city for a short time, I yielded to the temptation to remove the stitches—in this case silk—on the fifth day. I left the case in the care of Dr. C. W. Leigh, who reported satisfactory progress until subsequent dressing on the seventh day. On this day some sudden movement in bed resulted in a slight gaping of the wound upon the left side. On account of this the patient was kept in bed for the wound to heal by granulation. A slight fistulous opening remained, necessitating a second opening of the wound, when one of the buried sutures—silkworm gut—was removed and no further trouble was experienced. When discharged from the hospital she was in excellent condition and the uterus was well in place.

September 9, 1889, the woman expresses herself as feeling as well as she ever did in her life; says she has hardly felt a pain or an ache during the past year; the uterus is still nor-



mal in position and size; ovaries can not be felt by ordinary digital examination.

November 11, 1890, patient came to my office at my request. She says she was in excellent health throughout the year until the heat of last summer, when her appetite failed; and, not menstruating during July, she consulted Dr. Henrotin during my absence from the city, who pronounced the operation perfect, said she had no uterine trouble, and referred the suppression of the menses to anemia.

Iron was given and she improved and menstruated the following month, and regarded herself as quite well.

On examination, to my surprise, I found a tumor behind the uterus half as large as my fist. With the exception of this the pelvic organs were in healthy condition and in normal position, except that the neck of the uterus was crowded slightly forward by the size of the growth. As the discovery of this tumor was quite accidental and its presence had caused her no inconvenience, and as she had never suffered from ovarian symptoms or disease, I am disposed to regard it as an incipient cyst of the ovary, and certainly in no way connected with the operation.

CASE VII.—Mrs. S., age 27, married five years, three children; had retroversion of the uterus and ovarian prolapse; menses always painful and often prolonged eight days; pain in back, uterus subinvolved, cervix and perineum torn, patient very much reduced and unable to work. Trachelorrhaphy and perineorrhaphy were performed in June, 1888, and a uterine support subsequently used. This, combined with vaginal tamponade, extending over a considerable space of time, failed to relieve her distressing symptoms.

September 11 of the same year the round ligaments were shortened about four inches at St. Elizabeth's Hospital. At the end of four weeks she was discharged from the hospital feeling well, with the uterus and ovaries in good position. In the following March she became pregnant, and went to full term without any untoward symptoms. Labor was normal, and her convalescence only interfered with by painful and troublesome nipples. As a consequence of early weaning, the child became puny and poorly nourished, and was a source of great anxiety to her through the summer months. The child died in September: and having lost two previous children, its death was a great shock to her, and, being pregnant again, she became a victim of hysterical attacks, followed by melancholia. All this occurred during my absence in Europe, and she was taken to St. Elizabeth's Hospital.

Dr. Frank examined her carefully for any uterine or ovarian trouble, and pronounced her entirely free from any pelvic disease, and the uterus in normal position for that period of pregnancy.

November 16 I called at the woman's house and found her much improved in her mental condition and assisting in the domestic duties, cheerful and bright, with no indication of her former depressed or irritable moods. The indications are that pregnancy will now advance to a successful termination.

In the above cases it will be seen that the indications for the operation were as follows: Retroversion and prolapsus

ALEXANDER'S OPERATION FOR SHORTENING THE ROUND LIGAMENTS, WITH  
RESULTS AFTER TWO YEARS.

| Number. | Name.      | Age. | Parous or not. | Date of operation. | Results as to                                   |                                           | Remarks.                                                                                                                       |
|---------|------------|------|----------------|--------------------|-------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|         |            |      |                |                    | Position of Uterus.                             | Relief of Symptoms.                       |                                                                                                                                |
| 1       | Mrs. J.    | 42   | Yes.           | Sept. 18, 1886.    | Retroflexed .....                               | Not improved.....                         | No apparent reason for failure.                                                                                                |
| 2       | Miss R.    | 22   | No.            | Feb. 16, 1887.     | Normal .....                                    | Perfect .....                             | Pain in region of round ligaments at times.                                                                                    |
| 3       | Mrs. R.    | 35   | Yes.           | Feb. 26, 1887.     | Normal .....                                    | Perfect .....                             |                                                                                                                                |
| 4       | Mrs. C.    | 32   | Yes.           | March 6, 1887.     | Normal until next pregnancy. Retroverted since. | Perfect while uterus remained in position | Counted as a good result.                                                                                                      |
| 5       | Mrs. B.    | 30   | Yes.           | March 12, 1887.    | Normal 2 years.                                 | Perfect. Had child since                  |                                                                                                                                |
| 6       | Mrs. P.    | 26   | Yes.           | Apr. 15, 1887.     | Normal 1 year.....                              | Perfect while observed .....              |                                                                                                                                |
| 7       | Mrs. T.    | 24   | No.            | Apr. 26, 1887.     | Retroflexion and partial retroversion .....     | Improved .....                            | Adhesions.                                                                                                                     |
| 8       | Mrs. G.    | 25   | No.            | May 13, 1887.      | Partial retroversion .....                      | Perfect .....                             | Adhesions.                                                                                                                     |
| 9       | Miss McL.  | 24   | No.            | June 20, 1887.     | Normal .....                                    | Perfect .....                             |                                                                                                                                |
| 10      | Mrs. P.    | 27   | Yes.           | Sept. 25, 1887.    | Normal .....                                    | Not improved .....                        | Pendulous ovaries.                                                                                                             |
| 11      | Mrs. De S. | 23   | Yes.           | Oct. 26, 1887.     | Normal 4 months                                 | Improved .....                            |                                                                                                                                |
| 12      | Miss Ch.   | 40   | No.            | Jan. 21, 1888.     | Normal .....                                    | Not improved .....                        | Subsequent removal of tubes and ovaries did not relieve                                                                        |
| 13      | Miss L.    | 19   | No.            | Apr. 24, 1888.     | Normal .....                                    | Perfect .....                             |                                                                                                                                |
| 14      | Miss B.    | 22   | No.            | Apr. 26, 1888.     | Normal .....                                    | Perfect .....                             |                                                                                                                                |
| 15      | Mrs. B.    | 25   | No.            | May 25, 1888.      | Retroflexion .....                              | Nearly perfect .....                      | Adhesions. Occasional pain in round ligament region. An old bladder irritability improving, and is nearly cured.               |
| 16      | Mrs. M.    | 28   | Yes.           | June 5, 1888.      | Normal .....                                    | Improved .....                            |                                                                                                                                |
| 17      | Mrs. L.    | 32   | Yes.           | June 27, 1888.     | Retroflexed in 3 months .....                   | Not improved .....                        | Round ligaments very small and weak. Left broke during operation. Subsequent removal of tubes and ovaries with perfect relief. |
| 18      | Miss E.    | 25   | No.            | July 17, 1888.     | Normal .....                                    | Perfect .....                             |                                                                                                                                |
| 19      | Mrs. H.    | 30   | Yes.           | Nov. 12, 1888.     | Retroflexed.....                                | Not improved .....                        | Pendulous ovaries. Round ligaments small and weak. Right broke during operation.                                               |

of both uterus and ovaries in Cases IV, V, and VII; pro-cidentia with enlarged, tender ovaries in Case III; while Cases I, III, and V presented the usual menstrual disorders indicative of the severer types of uterine and ovarian displacements, and were upward of ten years' standing.

Cases IV and VII were of more recent date, being respectively of three and five years' duration; but pain was a prominent symptom in both, and had resisted careful and persistent treatment.

Case VI—of fifteen years' standing—had very naturally tired of routine local treatment, and, having personally observed the benefits accruing in other cases, earnestly requested the operation.

Case II was the only one in which adhesions were any material obstacle to the restoration of the uterus to a normal position, though they existed in a minor degree in Cases I, V, and VII.

As I have before stated, pessaries had been formerly tried in six of the seven cases, but in each of those with ovarian complications they were a source of too great irritation to be tolerated, and in the remaining two had resulted in no appreciable benefit.

## CLINICAL LECTURE ON DISEASES OF THE SKIN.\*

[By HENRY WILLIAM BLANC, M. D., Dermatologist to the Charity Hospital.]

*Gentlemen:* Having briefly reviewed the subjects taken up at our last meeting, and shown you a number of patients who have been under our observation for several weeks, so that you may by sight and touch determine for yourselves the results attained by treatment, we will now pass on to the consideration of new cases.

### TINEA VERSICOLOR.

The first case that I have to show you is one of tinea versicolor, or, as it is sometimes called on account of the scaly or dandruff-like appearance which it frequently presents, pityriasis versicolor. This affection is sometimes spoken of as "liver spots," the idea being that the liver may be directly or indirectly concerned in its etiology, but this view is entirely erroneous, as tinea versicolor is a parasitic disease, being due to a vegetable fungus, somewhat resembling that of ringworm, and which is called the *microsporon furfur*. The word *furfur*, as you know is the Latin for bran, and it is from this that fur-

\*Delivered before the Medical Class of Tulane University.



furaceous, meaning bran-like, or scaly, is derived. This man is 27 years old, and is otherwise in good health.

He first noticed these little fawn-colored patches on the anterior and posterior surfaces of his thorax about ten months ago. They produce no special discomfort, and seldom itch except when he perspires. Latterly the disease has spread from the thorax on to the abdomen, and he has a few patches on the shoulders over the deltoid muscles, and on the back between the scapulæ. You will notice that the affection is a macular one, being level with the skin, and is characterized by numerous, more or less circular, brownish patches which have coalesced in many places forming gyrate lesions. It is chiefly on the edge of the eruption that the lesions are most distinct. Here is a rather smooth portion of the eruption. Follow the course of my finger as I scratch the skin and you will see that I have removed a portion of the eruption, and that the surface is scaly where my finger nail has passed. This is a useful point in diagnosis, as it helps us to distinguish the disease from chloasma, an affection which it closely resembles, for the lesion of chloasma is not scaly and its pigmentation can not be removed with the finger nail.

Another method of diagnosis which I have never heard of being practised elsewhere, and which I have found very useful, is the *dye test*. For this purpose I keep in my ward a weak solution of an aniline dye—gentian violet is the one I use, and with this I paint the pigmented and healthy skin. If the disease is *tinea versicolor* the parasite will take up the stain and the patch will become much darker, making the contrast with the healthy skin much more distinct. This dye will remain after a gentle sponging, which is not the case in chloasma.

Should there be any uncertainty as to the diagnosis, the microscope should be used. A few of the scales are to be scratched off with the edge of a pen-knife and placed under a cover-glass, after having been previously moistened with liquor potassa. The scales are better examined if slightly teased with a sharp needle. If the affection be *tinea versicolor* the spores and mycelia of the parasite will appear everywhere in the field of the microscope, and can easily be detected. They look like little round groups (spores) scattered here and there in a net-work of branching thread-like bodies (mycelia). Epidermal cells and oil from the glands will be found in greater or less abundance.

*Tinea versicolor* is classed with favus and ringworm, as one of the three vegetable parasitic diseases of the skin. Unlike the other two affections, *tinea versicolor* is usually found in adults; and begins almost universally in the region of the

sternum, or between the shoulder blades. The majority of cases present an eruption located like the one before you; though occasionally we meet with persons who have the eruption extending from the thorax down over the extremities nearly to the wrists and ankles. A case which I presented to the class last year was somewhat exceptional, as the eruption began on the abdomen and spread around over the small of the back, being limited above by the ribs and below by the hip bones.

Being a disease of parasitic origin, it is reasonable to suppose that tinea versicolor is communicable; but the history of a large majority of cases does not bear out this supposition. We know that it is very persistent, and when not thoroughly cured is apt to recur.

The treatment is the *destruction of the parasite*. Any parasiticide will cure the disease. Apply your remedy as a lotion or as an ointment. The preparations of mercury or of sulphur are, perhaps, the best. I prefer the latter, and am in the habit of applying a lotion of sulphite of sodium, as follows:

|                       |               |
|-----------------------|---------------|
| Sodium sulphite ..... | one ounce.    |
| Alcohol.....          | three ounces. |
| Water.....            | three ounces. |

This is to be applied to the surface two or three times a day. In addition, the patient is to take warm baths and use carbolic soap. This plan of treatment I shall apply to this case, and when he returns in a week from to-day his spots will doubtless have become much paler. By the constant use of this lotion the disease may be entirely cured in from three to four weeks. Internal treatment is not called for, as the malady is hyperdermal. Of course, when anæmia accompanies this disease, iron and sustaining tonics are indicated.

#### MORPHŒA.

The disease to which I shall now call your attention is a comparatively rare one, and is classed by some authors as a form of scleroderma. The patient is a young woman, 24 years of age, who says that she has had this patch on her right cheek nearly five years. It has caused her no special inconvenience, and never produces any pain, though she gives a history of an occasional neuralgia in the region of the right ear.

Looking at the disease I would describe it as a firm, smooth, discrete lesion in the middle of the right cheek, having the shape of a spherical triangle, and being about the size of a silver dollar. You will note that the lesion is whiter than the normal skin and that its edges are very slightly

elevated. The center is somewhat depressed. Viewing it more closely we note a delicate violaceous pigmentation of its borders.

The diseased portion of the skin is so indurated that it keeps its shape when I elevate the patch between my thumb and forefinger. This disease is *morphœa*.

The patient has no other lesions on her body and finds no inconvenience in this except disfigurement. On pricking the surface of this lardaceous patch I find that it is slightly anæsthetic. The etiology of the disease is unknown, though the fact that many cases of *morphœa* are unilateral, and appear along the course of certain nerves, suggests the idea that it has some relation to the nervous system, like herpes zoster. This view has been taken by Tilbury Fox, Hutchinson, and others, and a number of my cases, by illustrating this tendency, led me to accept this theory. *Morphœa* is to be differentiated from vitiligo by the fact that in the latter disease the white spots are soft and pliable, there being no structural change in the skin; from scleroderma, the "hide-bound" disease, chiefly from the fact that *morphœa* is much less extensive, is usually asymmetrical, and has upon its edges a violaceous appearance due to increased vascularity. Scleroderma does not present these symptoms. *Morphœa* is to be differentiated from leprosy by the absence of other symptoms, general and local. By way of treatment, I shall paint upon this patch some sodium ethylate, as I have already done upon a similar case. This substance, which is an amber colored liquid, will destroy that portion of the skin with which it comes in contact, producing little or no pain.

#### COPAIBA ERUPTION.

The patient is a Frenchman, and his case is particularly interesting because of the close resemblance it presented at the outstart to scarlet fever. Looking at him to-day we see nothing on the skin which is abnormal but a slight desquamation. The patient entered the hospital four days ago with a history of having had a chill two nights previous to admission. This chill was immediately followed by an eruption, accompanied by fever. On examination, the patient was found to have an erythematous rash over his body, arms and thighs. The face was free, and the eruption was found to be much less intense on the forearms and hands, and scarcely perceptible below the knees. The lesion consisted of circular scarlet macules, having about the diameter of a pea, but the shape of these was only distinguished on the edge of the eruption, as a large majority of them had already become confluent, pro-



ducing a rash which closely resembled that of scarlet fever. There was no itching, and he had no cough nor coryza. His temperature was 102.4 Fah. There was some erythema of the throat, and his tongue was coated brown, but without redness of the tip.

Being unwilling to make a diagnosis of scarlet fever, I questioned the patient more closely and ascertained that he was suffering from an attack of gonorrhœa, which he had had for ten days, and for which he had been taking up to the day before his admission a preparation prescribed for him by a druggist. Fortunately he had brought the bottle with him, and I was enabled by sending the number to the druggist to ascertain that it contained balsam of copaiba. His temperature fell the following day to 100.5, and then gradually to what we find it to-day, normal. So you see we find him almost perfectly well only six days after the initial chill.

With this history the differential diagnosis from measles and scarlet fever is a clear one. Measles would have had longer prodromal symptoms, a maculo-papular rash, and probably a cough accompanied by coryza. Had this been scarlet fever he would have been still in bed from a disease much more severe than the one he has. He has never had the strawberry tongue of scarlet fever, nor has the sore throat been severe. Indeed, he has not been aware that there was any trouble in his throat at all.

Before dismissing this case, it is proper to state that eruptions similar to the one we are here studying have been noted as complicating gonorrhœa, and are supposed to be of angio-neurotic origin, the irritant being in the urethra. But as these eruptions usually occur in cases of gonorrhœa which have been treated with copaiba, it is reasonable to consider the latter as the exciting and the gonorrhœa as only a predisposing cause.

#### AN ITCHING 'SYPHILIDE.

This patient is a married man, 32 years of age, and has several children. He is a native of Italy, and does not speak English. You will recall our first experience when we were called upon to diagnose his disease, just one month ago.

Without a history of the case we were compelled to make a diagnosis on the objective symptoms presented. These were well marked, for he had a papulo-macular eruption on his body and extremities, being very well defined on the thorax and abdomen; while on the forehead were a number of fleshy, raised lesions, extending from temple to temple. This combination of several lesions pointed to secondary syphilis, and

our diagnosis was further confirmed by an examination of the glands, that is, the epitrochlear, inguinal and cervical, all of which were both enlarged and indurated. On the penis was a flat papule, but no chancre. His throat was red, but not inflamed. From his gestures I concluded that the eruption produced itching on the face and trunk.

This complicated the case, as the lesions of syphilis, though sometimes itchy on the face and scalp, seldom produce discomfort therefrom, whereas this was troublesome on the face and body. Suspecting that some latent form of erythema simplex might accompany this eruption, I have had this man under constant observation, and have lately been able to communicate with him through an interpreter—his brother. It now appears that the itching is constant, though never severe, and is present only in the lesions. The tubercular lesions on the face have produced most inconvenience by itching. Patient denies having had a chancre, but his brother says that his wife has recently had an eruption similar to her husband's, and is rheumatic. Several months ago she had a miscarriage. Whether patient gave the disease to his wife or he to her it is difficult to say, but one thing is certain: that the eruption on the body has nearly disappeared and the tubercular syphilide of the forehead (*corona veneris*) is now rapidly melting away under a mixed treatment of a sixteenth of a grain of the corrosive chloride of mercury and twenty grains of the iodide of potassium—a therapeutic diagnosis.

#### MEETING OF THE NATIONAL ASSOCIATION OF RAILWAY SURGEONS.

At the Kansas City meeting of the National Association of Railway Surgeons last year, it was decided to hold the next meeting at Buffalo, May 7th, 8th and 9th of this year. But on account of the meeting of the American Medical Association being set for the same time, it has been decided to change those dates, and to hold our next meeting at Buffalo, April 30 and May 1 and 2, to which all railway surgeons are cordially invited. To all railway surgeons sending their names and addresses to the Corresponding Secretary, a copy of the constitution and programme will be sent. All those wishing to read papers should send in the titles of their papers without delay. For further information inquire of

A. G. GUMAER, M. D.,  
Corresponding Secretary.

Buffalo, N. Y.

## CORRESPONDENCE.

EOLA, La., March 4, 1891.

*To the Editors New Orleans Medical and Surgical Journal:* Please announce for the benefit of the members of the Louisiana Medical Association that the next meeting of the society is called for the 13th May, second Wednesday, at New Orleans.

The circumstances which govern me in this selection of date and place, I beg briefly to explain.

In the first place, the coming meeting of the Louisiana State Medical Association is a deferred meeting—being somewhat irregular, by reason of the impossibility of consummating the wishes of the society, to meet at Baton Rouge last year, 1890, during the session of the General Assembly.

It is needless to acquaint the members of the society with the reasons governing the association in selecting Baton Rouge as the place of meeting last year. They were simply to present a bill to the General Assembly to regulate the practice of medicine in this State, and to bring to bear the influence of our society to compass this end. In spite of the high water, which prevented the meeting from being held at Baton Rouge, an effort was made to carry out the views of the members by the appointment of an auxiliary committee on State medicine and legislation, of which Dr. A. B. Miles was chairman. This committee did prepare a bill, liberal in character, which bill was duly presented to the House, where it passed, but in the Senate it failed to meet with that sanction which would have secured to Louisiana some protection from the hands of incompetent and illy qualified physicians, who can still find in this State a field for the exercise of ignorant charlatanism.

There being no necessity to meet at Baton Rouge this year, as the evident intention of the society in selecting Baton Rouge last year was on account of the desire to influence the General Assembly to pass such laws concerning the practice of medicine as would put our State on an equality with such States as Alabama, Virginia, Minnesota, and many other States, and such intention being no longer possible to accomplish in the year 1891, by reason that the Legislature will not convene this year, I addressed letters to members of the society in different parts of the State, twelve letters in all,



respectfully asking each member to whom I wrote to express his opinion concerning the time and place of our next meeting. I did not address a single letter to any member residing either at New Orleans or Baton Rouge, for the simple reason that I conceived that those members living in these respective places would naturally be biased in favor of having the meeting held in their own towns.

It is true, in my letters of inquiry, I did suggest that, to me, New Orleans seemed the more suitable place, and for the date. I preferred Wednesday, May 13, 1891, in order to permit the Attakapas Medical Association to hold its meeting first, which meeting of the Attakapas Association will be held Tuesday, May 5.

To my letters of inquiry, I have received about half a dozen replies: these replies expressed the opinion that New Orleans would be the most suitable place for our next meeting, and that the second Wednesday in May would be a very suitable time to hold the meeting of the State society. To my other letters I have received no replies at all.

However disagreeable the task, I must, nevertheless, confess with the most poignant regret, that there appears to be a want of interest manifested by the members of the State society to such an extent that I beg respectfully to call the serious attention of our members to this deplorable want of interest in an organization which should be fostered by every motive that can appeal to our pride as citizens of a great commonwealth, and as respectable members of so honorable a profession as medicine. It has been the painful duty of Dr. R. H. Day, a former president of the Louisiana State Medical Society, to call the attention of the members of the association to this very subject, and by the most urgent appeals to that "esprit de corps" which should characterize every organization or association of gentlemen, linked together by a membership having for its object the enlightenment of our minds by that attrition which is created by an interchange of ideas on such leading topics relating to medicine, surgery, hygiene and other allied subjects, yet the result of such appeals appears short-lived or attended with little improvement in infusing life and vigor into our association.

It is only by organization, persistently maintained, and a sacrifice of personal and selfish motives that we can expect to reach such a standard of excellence as a medical society as would place us in the first ranks of those of other States, membership in which confers a badge of distinction. Shall we confess our inability intellectually to reach such a standard? I trust

that a full and successful meeting at New Orleans on the 13th of May next will be a sufficient answer to the above question.

Respectfully,

C. D. OWENS, M. D.

*Pres. La. State Med. Society.*

The Fortieth Annual Session of the Iowa State Medical Society will be held at Waterloo, Iowa, April 15, 16 and 17, 1891.

The Twenty-fourth Annual Session of the Mississippi State Medical Association will be held in Meridian, Miss., April 15, 1891.

## EDITORIAL ARTICLES.

### AN IMPROVED METHOD OF TREATING DIPHTHERIA.

A noteworthy contribution to the literature of diphtheria is the paper by Dr. A. Seibert in the *New York Medical Journal*, December 6, 1890.

Mystery increases terror. The unsettled state of the pathology and advent of diphtheria made us regard it with greater dread than most diseases with which we are better acquainted. Our ignorance of the *modus operandi* of a morbid germ or products causes us to feel that we can not treat the resulting disease intelligently; but when the morbid processes are clearly defined, we can map out a rational line of treatment and feel that the remedies administered can be graded with almost mathematical precision, and that definite results can be predicted from the use of our curative agencies.

The gloom surrounding the precise method in which the germ of diphtheria acts locally and generally is responsible for the great variety of drugs and plans of treatment employed

against this disease. The recent discoveries in bacteriology have, however, dissipated somewhat of this gloom, and have enabled us to attack the invading germ with greater precision. The bacillus of Klebs and Löffler is now pretty generally admitted to be the causative agent in diphtheria.

Seibert regards the diphtheric as primarily a local one, caused by an invasion of the germs into the mucous membrane of the respiratory tract, resulting in an inflammation of the invaded region. But other pathogenic germs may invade the mucous membrane along with the bacillus of diphtheria, thus causing the clinical picture to vary. Seibert surmises that these clinical variations might be due to the introduction of the various pathogenic microorganisms in *different proportions* into the mucous membrane at the same time.

The diphtheritic membrane, as shown by the investigations of Heubner, consists, in the beginning, of an exudate coming from the inflamed blood vessels, which, after wandering upward with the numerous leucocytes between the deeper layers of epithelial cells, lodges between the superficial horny cells and there coagulates, imbedding within it numerous bacteria. This stream of exuding fibrin, from below upward, keeps on steadily as long as the action of the bacteria upon the blood vessels and the surrounding tissues progresses, ultimately resulting in all the epithelial layers being permeated, distended and infiltrated by this coagulated fibrin, so that, while in the beginning of a case the exudate is imbedded between the epithelium, in advanced cases the epithelium (or what is left of it) is imbedded in the exudate.

The practical deduction from these facts is that the appearance of the pseudo-membrane is the sure sign of bacterial action upon the *lower* layers of the mucous membrane, directly below this sign of invasion.

The conclusions as to the treatment are summed up by Seibert as follows:

1. The pseudo-membrane is an exudate coagulated in the epithelium coming from the deeper of the mucous membrane, and therefore not the disease, but the result of it.
2. Hence all treatment attempting to dissolve or to take



away forcibly this pseudo-membrane *is to no purpose*, as it does not in the least affect the diphtheritically inflamed parts.

3. All medicines given by the mouth for the purpose of entering the invaded region of the mucosa are of no use whatsoever in this direction, as they can not possibly penetrate the coagulated fibrin and swollen epithelium to reach the bacteria producing this affection.

4. All local applications of strong caustics—as the galvano-cautery, nitrate of silver, etc.—are of no avail, as the diphtheric germs are far beneath the reach of these agents.

Læffler has shown that the bacillus of diphtheria strongly resists the action of antiseptics. A solution of bichloride of mercury, containing one part in 10,000, is incapable of destroying these germs. When administered by the mouth and teaspoonful doses, such a solution is incapable of doing any damage to the bacilli in the diseased mucous membrane. If the bichloride can not destroy the bacilli, it is useless to rely on the host of other remedies that have been used in diphtheria.

Impressed with the utter inefficacy and unreliability of the methods of treatment commonly employed, Dr. Seibert devised a plan whereby the invading germs can be directly attacked in their resting place in the mucous membrane. For this purpose he has had constructed an apparatus consisting of three parts: (1) a hypodermic syringe, (2) a tube strong and long enough to reach the pharynx, and (3) a small hollow plate which can be screwed on the end of this tube, holding the points of five hollow needles. When the parts are screwed together, the three parts make a firm, handy and pliable instrument that may be easily introduced over the child's tongue, pressing it down, the points of the needles being directed upward into the pharynx.

For a germicide, Seibert uses a 2 per cent. aqueous solution of chlorine, about two drops being injected into the submucous tissues beneath the patches of false membrane. No pain is caused by the introduction of the needle points.

Seibert has employed his method in seven well marked cases of pharyngeal diphtheria. From these he concludes that,

first, the method can be employed without inconvenience and danger to children; second, the chlorine, thus brought in contact with the Loeffler bacilli and the inflamed parts, evidently tends to check the morbid processes in the mucous membrane and to shorten the disease.

Of Seibert's seven cases, one died from the extension of the pseudo-membrane into the trachea and bronchi of the first and second order; but in the remaining cases in which the pseudo-membrane was accessible, the effect of the treatment was most striking and beneficial.

In this new method of treating diphtheria, Seibert has given to the world a valuable means of combating an insidious foe, and has made therapeutics advance a step in the direction of positiveness by applying known remedial forces to meet a well defined pathological condition.

#### UNUTILIZED RESOURCES—DR. JOS. JONES AND THE KOCH LIQUID.

Some weeks ago, the secular press of New Orleans informed the public that Mr. Benj. Harrison, President of the United States, had sent a vial (containing five grams) of Koch's liquid ("Tuberculin") to Dr. Joseph Jones, of this city. At the time that the vial in question was sent to the doctor, the "lymph" was in great demand. The amount of the liquid manufactured in Koch's laboratory was not nearly great enough to supply the enormous demand for it; and it was a special mark of courtesy to the people of the United States that the President received five vials of the precious liquid.

In distributing the vials among the various parts of the Union, it could hardly have been the design of the President that the persons or institutions selected by him for the bestowal of the "lymph" should allow it to remain unused by the receivers, or so securely locked up that progressive men, desiring to take part in the solution of a most stupendous scientific question, would be unable to obtain some of it for independent investigation. It is somewhat more reasonable to suppose that

our Chief of Executive, being an enlightened man, and impressed with the weightiness of the question of curing tubercular diseases, intended that the Koch fluid should be used in the interest of humanity, instead of being exhibited to a class of admiring and awe-struck medical students. Up to the present, however, the world, lay or medical, has not been fortunate enough to hear of any studies that Dr. Joseph Jones may have made with the fluid which the President, by courtesy or mistake, sent to him: and to all intents and purposes, that vial is still in winter quarters.

In our February and March issues, we gave an account of studies made with the Koch fluid at one of our hospitals. No time was lost, but by the time the fluid arrived full preparation had been made. The results are shown in the published articles.

Dr. Jones, however, not only does not care to make use of the "potent and poisonous drug" himself, but he imposes a condition on those who do want to use it as effectually to turn all prospective investigators away. No one questions the propriety of demanding that investigations with the "lymph" shall be carefully recorded, and carried on in organized institutions: this last condition accords well with Koch's own views, but it requires an effort to believe that it is necessary to hand in such reports to Dr. Jones, for this is what he demands of those who would experiment with this fluid. It is this consideration which has deterred physicians from applying to Dr. Jones for a small amount of the fluid. The chief medical officer of one of our hospitals made an official request for some of the "lymph," to be used in the hospital, and promised that accurate records of the cases treated would be kept; but the result of this application was not such as to encourage other applicants.

It seemed to be the prevailing impression that some of the fluid could only be obtained from Dr. Jones as a personal favor. Among the members of the visiting staff of the Charity Hospital there was one skeptic, one doubting Thomas, who did not share in the general belief. In order to resolve his doubts, he wrote, on March 10, 1891, to Mr. E. W. Haltord, the pri-



vate secretary of President Harrison. The following is the essence of the doubter's letter:

"If it be not encroaching upon your time, will you kindly advise me as to the President's intentions about the Koch's lymph sent to this city?

"Was it destined to Dr. Jones personally, or was it intended to enable the staff of the Charity Hospital properly to experiment with it? A good deal on account of this doubt, there has been, as far as I am able to ascertain, no use made of the lymph kindly sent by the president." \* \* \*

Under date of March 12, Mr. Halford wrote back:

"In answer to your note of 10th inst. I beg to say that it was the President's intention that the lymph sent to the Charity Hospital should be used by the superintendent in such manner as he thought best, presumably, of course, in experiments in hospital practice, if he should deem that the best use to make of it."

It was manifestly the President's intention that the fluid should be used in the Charity Hospital, and under the supervision of the chief medical officer. The President's wishes have thus far not been carried out. If Dr. Jones has no faith in the fluid, or does not desire to use it, it would be wiser and more becoming to transfer the stuff to somebody in the Charity Hospital who has faith in it, and is skilled enough to use it properly. Of such men there is no scarcity. By making such a transfer Dr. Jones would relieve himself of the irksome burden of being the custodian of an *elephas albus*, which honor he acquired, not by courtesy, but by mistake.

#### THE VIRCHOW TESTIMONIAL.

In connection with our editorial in the February issue, in which we called the attention of the profession to the proposed testimonial to Professor Virchow on the advent of his seventieth anniversary on October 13, 1891, we are much pleased to announce that the local profession has responded to the appeal of the Berlin committee of the Virchow testimonial

fund by contributing the sum of \$55, which have been forwarded to Dr. John S. Billings, of Washington, D. C., the representative of the committee in the United States.

At the request of Dr. Matas, who was especially commissioned by Dr. Billings to represent the matter here and through whose instrumentality the subscriptions were collected, we are pleased to add the copy of the document sent to Dr. Billings with the appended list of subscribers:

NEW ORLEANS, March 9, 1891.

In response to the courteous invitation of the Berlin committee of the Virchow testimonial fund through its authorized representative in the United States, Dr. John S. Billings, of Washington, D. C., the undersigned members of the medical profession of this city desire to associate themselves with their professional brethren of the United States and of the civilized world who, recognizing the transcendent merit of the author of the "Cellular Pathology," and the imperishable benefit of his work to medical science, avail themselves of this opportunity of adding their names to the list of Professor Virchow's admirers, and of contributing their voluntary pro rata to the fund destined to meet the expenses of a fitting and lasting testimonial on the occasion of the seventieth anniversary of the "Father of Modern Pathology:"

A. W. de Roaldes, M. D., \$5; A. McShane, M. D., \$5; F. W. Parham, M. D., \$5; Chas. Chassaigiac, M. D., \$2; P. E. Archinard, M. D., \$5; C. A. Gaudet, M. D. \$5; E. T. Shepard, M. D., \$5; F. Loeber, M. D., \$5; O. Joachim, M. D., \$3; Henry Dickson Bruns, M. D., \$5; J. D. Bloom, M. D., \$5; Rudolph Matas, M. D., \$5.

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#### A NOTE ON KOCH'S TREATMENT.

*Editors New Orleans Medical and Surgical Journal:*

GENTLEMEN—Permit me to call attention to an article by Karl von Ruck, of Asheville, N. C., in the last number of the

Journal of the American Medical Association, on Koch's treatment of consumption. This article has struck me as one of the most sensible things I have seen written on this subject. At the January meeting of the Orleans Parish Medical Society I took occasion, in the discussion which followed the reading of my paper, to say (although the views expressed in the body of my paper were not so stated, being based as they were upon the experience of others up to that time) that I could not help considering it unscientific to administer the lymph in doses sufficient to produce constitutional symptoms. I feel more convinced than ever now, with fuller information regarding the experience of the world since that time. The plan advocated by Koch himself and so far almost universally adopted by those who have used the substance, was to begin with a milligramme as a tentative dose, gradually increasing this until the decided symptoms were produced. The plan which I favored was based upon Pasteur's principle of toleration gradually established by the giving of small doses, insufficient to produce general symptoms, and repeating this frequently through prolonged periods. The idea was to avoid carefully the production of any general symptoms at all, relying upon the effect of the infinitesimal doses, administered at intervals which experience alone will determine as the most advantageous for the amelioration of the local condition, at the same time that no explosion was caused by the local effect of the remedy.

Dr. von Ruck has carefully avoided giving rise to any general symptoms at all, although he pushes the dose *up to the point* of producing them. Even this seems to me a little unsafe, but Dr. von Ruck's experience has been very gratifying. He rightly ascribes, I think, most of the disastrous results to the exhibiting of too large doses. Pursuing the plan which he has followed, I believe, will greatly improve our opinion of the remedy, which seems in a fair way, under present methods of giving it, of being consigned ere long to that limbo of lost and forgotten things, a fate, I believe, quite undeserved and much to be deplored, before the plan advocated by Dr. von Ruck has had adequate trial. Of course these remarks could not apply to the remedy used for diagnostic



purposes, since the guide here is the production of distinctive symptoms.

F. W. PARHAM.

*New Orleans, March 30, 1891.*

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We take pleasure in expressing our thanks for invitations to the Second Annual Commencement of the Tennessee Medical College, and the Fifty-seventh Annual Commencement of the Medical Department of the Tulane University of Louisiana.

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## ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

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### MEDICINE.

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#### HALVIVA: A SUBSTITUTE FOR QUININE.

I beg to be allowed to introduce to the medical world a remedy for malaria called "halviva," prepared from the Indian plant kreat. Kreat has long held high repute among the natives as a tonic and restorative; indeed, they consider it the miracle-working plant, and it is rapidly growing in favor with European practitioners, several of whom have testified to its value, amongst others Sir William Moore, the late honored head of the Bombay Medical Service. The natives use it in the form of an infusion, which they prepare fresh every day or two, and this has been their custom ever since we first went to India, and probably centuries before. The old botanical name was agathotes (*αγαθος*), which speaks volumes for the belief of former botanists in its efficacy. It is now generally recognized that quinine in a large number of cases produces ill effects; for example, it causes head symptoms, nervous exhaustion, and intense irritability, whereas kreat, which is equally useful in malarial fevers and the *malaise* set up by long continued exposure to malaria, is attended with no such serious consequences. Again, kreat can be taken with great advantage as a prophylactic, whilst the injudicious use of quinine for that purpose has resulted, in many instances, in marked deterioration of health. As a preventive quinine often fails, and

in malarial fever itself it frequently seems to intensify the mischief and add to the pernicious action wrought by malaria.

As a tonic it is unrivaled, being a pure clean bitter without astringency, and acting as a gentle laxative by increasing the secretion of bile. It is of great service in indigestion, accompanied by constipation; it is also highly beneficial in gouty dyspepsia and the legion of symptoms due to indigestion. Of course quinine acts well in many cases, but as kreasmin has never in my twenty years' experience failed to do good, I think I am justified in calling it a substitute for a medicine which frequently fails. Both natives and Europeans believe in it as a tonic in nervous debility, and as a restorative in exhaustion through excesses of various kinds; and, for my part, I can safely say I know nothing equal to it among the many fine tonics India possesses.—*Dr. in the British Medical Journal.*

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#### UPON THE ETIOLOGY OF BERI-BERI.

[DRS. JOSE MUSSO and JUAN B. MORELL, Bacteriological Laboratory, University of Montevideo, *Anales del Círculo Médico Argentino*, August, 1890, p. 313.]

The insufficiency of practical bacteriological investigations upon the etiology of Beri-Beri induced the writers to make some practical studies upon this subject. The material for these investigations was furnished by a patient coming from Matto Grosso on his way to the hospital at Montevideo.

Previously disinfecting the skin with hot water, bichloride of mercury (1 per cent), alcohol and ether, a small piece of the skin from the anterior region of the leg was removed with a scalpel, thoroughly sterilized beforehand. With a sterilized platinum needle, the blood flowing from the wound was then placed in various tubes: four of salt serum, three of gelatine, two of simple broth, and two of broth and glycerine. They were then placed in thermostats registering 37 deg. C. and 20 deg. C., respectively.

At the end of thirty-six hours a proliferation was observed in three tubes of serum, two of broth, and in one of broth and glycerine, or in six out of eleven tubes. Examining the tubes more carefully there was found to be present a special form of microorganism in a pure state in all the tubes save one, where other common forms of bacilli were intermixed. The constancy of these microbes, developing under special conditions, led the writer to examine them more minutely.

Examined under the microscope, without staining, they

presented a spherical or spheroidal form, united into groups of diplococci, or tetrads, and were from 1.40 mm. to 2.90 mm. in diameter. Under better conditions these spheres were found to contain a microbe from 0.55 mm. to 1.11 mm. in diameter, enveloped in a unicellular capsule. Staining in Ziehl's fluid and washing in alcohol gave unmistakable proof of a capsule, which remained uncolored, while the microbe accepted the stain.

On gelatine plates the colonies were in form of white drops of a yellowish tint, and some granules. The colonies on the agar agar plates were similar. The gelatine did not undergo liquefaction.

Inoculations practised upon rabbits produced a polyneuritis degenerativa. Cultures made from these rabbits gave positive results. The writers promise a histological study of these tissues in a future number.—*Journal of Nervous and Mental Diseases*.

#### DUST AND TUBERCLE BACILLI.

The question of the dissemination of tuberculosis is so interesting and important that we may call attention to an observation in this direction by Dr. M. T. Schnirer, of Vienna, recorded in the *Wiener Medizinische Presse*, January 4, 1891. One day in 1888, on rinsing the dust from some grapes, bought on a warm day, late in the summer, he found the water afterward quite dirty. Struck by the thought of the large number of phthisical patients who eject their sputa upon the streets, he injected ten cubic centimeters of this water into the abdominal cavity of each of three guinea pigs. One of the animals died in two days of peritonitis. The other two died in forty-five and fifty-eight days respectively. Examination of the bodies disclosed exquisite tuberculosis, originating at the site of inoculation, and partially caseous nodules in the peritoneum, in the liver, in the spleen, with but meagre deposits in the lungs. Tubercle bacilli were found in the nodules. Dr. Schnirer concludes that the conveyance was by means of the dust, as the water used was pure spring water of Vienna, and the glass receptacle containing the water, the doctor's hands and the syringe with which the injection was made had been previously sterilized. He assumes, though without direct evidence, that the vendor from whom the fruit was obtained was healthy.

The point Dr. Schnirer makes is, that tubercle bacilli may be in the dust of public streets, and may be attached to fruit or other articles exposed for sale and afterward used for food.

This fear seems to be exaggerated and contrary to the in-



ferences deducible from Cornet's investigations; for Cornet failed to find bacilli in street dust. Still, the observation of Schnirer is an interesting one, and its true significance may be estimated when taken in connection with facts continually accumulating. The experience of Schnirer may be open to inferences very different from those which he draws; but in any case, it is interesting to record and worth remembering in studying the important subject of tuberculosis.—*Med. and Surg. Reports.*

### CORNIL ON TOXIC ALBUMENS.

[Abstract from *La Rivista Internazionale d'Igiene*, December, 1890.]

The toxic action of pathogenic microbes does not depend solely on the microbes themselves, nor on the ptomaines. These alkaloids undoubtedly exert an influence on the genesis of the morbid symptoms of infectious diseases, but they do not produce the types of the diseases from which they are derived, and they can not be taken up by the system through inoculation. There exist other and intermediate products between the microbes and the animal tissues. These products are chemical agents, possessing great toxic energy. They represent the properties of the soluble albumens or their immediate derivatives. They may be obtained in a pure state by precipitation with sulphate of ammonia at 30 C. and elimination of the salt with dialysis of slightly acidulated alcohol. After cooling and settling, the liquid is filtered and a second precipitation obtained and subjected to dialysis and desiccation in vacuo at 40 C. A light, white amorphous substance is obtained, possessing all the reactions of soluble albumens.

In general these toxic albumens produce experimentally the lesions and general disturbances of the disease from which they are derived. They also insure immunity from a second attack. In weak doses they become reliable vaccine agents and protect the organism and subsequent infection by the bacilli or the toxic albumens. They have been obtained and experimented with as follows:

1. Diphtheria.—The toxic albumen of diphtheria is pathogenic and produces local lesions, apart from the false membrane, and general symptoms analogous to those of diphtheria. The vaccine virus has not yet been found.

2. *Staphylococcus piogenes aureus*.—The toxic albumen obtained from the culture produces at the point of inoculation intense inflammation with infiltration. The pus does not contain microbes.

3. Anthrax.—The toxic albumen reproduces the character of the disease and in weak doses possesses vaccine properties.

4. Typhoid fever.—A toxic albumen which causes inflammation at the inoculated point, followed by the death of the animal experimented on. Autopsy shows a slight adipose degeneration of the liver, but without intestinal lesions.

5. Tetanus.—A toxic albumen which causes death following on cramps and paralysis. It has no vaccine properties.

The discovery of these toxic albumens in connection with the ptomaines is an interesting fact. These substances, if they have not pathogenic properties identical with those of the entire microbic culture, possess an indisputable pathogenic importance and probably concur in a natural and therapeutic immunity from the diseases from which they are derived.—*Abstract of Sanitary Reports, March 6, 1891.*

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#### SHALL WE CASTRATE THE HUSBAND OR LIGATE THE VAS DEFERENS?

The series of letters to Dr. Fenger from Professor Senn, written during his "Four Months Among the Surgeons of Europe," embraced some tolerably sharp criticism, and no part of them created more profound sensation, perhaps, than that which related to Mr. Lawson Tait and his practice of removing the ovaries for the purpose of preventing pregnancy.

It was following the famous surgeon's cogitations over one of these operations that the following startling utterances were written: "To me the indications which induced Mr. Tait to remove the ovaries and tubes in this case afforded abundant food for serious thought. There can be no question in my mind, and in the mind of any one who has the well-being and happiness of his fellow-beings at heart, that it was not desirable that the woman should again be exposed to the dangers of another pregnancy; but as a practical American it occurred to me that it would have been wiser to resort to the less hazardous procedure of unsexing her husband, which would have certainly secured the same immunity, at a minimum risk of life, and, morally, would have been more justifiable. This poor creature had suffered untold agonies, and why submit her to such a serious operation to procure sterility, when the same object could have been reached without any danger to life by unsexing the other party?"

This shocking suggestion, and coming, too, from an American, grated so harshly upon Mr. Tait's refined sensibil-

ities that ever since the doors of the establishment have been securely barred against all Americans.

It may be remembered that Thos. Robert Malthus, the scientific expounder of the principle of population, was a native of England, and Mr. Tait's outraged feelings may be somewhat mollified toward the wicked Americans when he is reminded that this good Britisher (one of his own countrymen) conceived the idea of ligating the vas deferens in order to destroy fruitful marital relations. Latterly, however, like Mr. Tait, there is a pretty universal disposition to secure the Malthusian idea of population, as well as to prevent conception for other reasons, by castrating the woman. We presume that Mr. Tait's method will prevail so long as the practice of surgery is confined wholly to the male members of society. Malthus' theory was that "the realization of a happy society will always be hindered by the miseries consequent on the tendency of population to increase faster than the means of subsistence." Many women are willing converts to the Malthusian theory. Many of the sterner sex, too, are heartily in accord with the doctrines taught by that learned Englishman, and cheerfully reduce the theory to practice, but of course not by the method proposed by Malthus. One of the later disciples is Dr. F. Deppler, who is evidently practising tolerably extensively in the direction of staying the increase of population by practising the modernized methods. Hear what he says regarding the effects of castration on woman, and its usefulness in promoting his conception of Malthusian ideals:

"The sexual desire remained, and was the more pronounced the earlier in life the operation was performed.

"The operation offers no impediment to marriage; three of the author's cases had married and had lived happily with their husbands for years. A marriage with a castrated woman is the ideal Malthusian marriage, and the only way the Malthusian idea can be carried out without endangering the health and happiness of the woman."—*Weekly Medical Review*.

#### OXYGEN ADMINISTERED BY THE RECTUM AND BY SUBCUTANEOUS INJECTION.

Dr. Francesco Valenzuela has written a paper for *El Siglo Médico* regarding his peculiar plan of employing oxygen by the rectum and hypodermically. An abstract of his paper appeared in the *Lancet* for January 3. The new treatment has special reference to the relief of senile pneumonia. The writer was led to try his method by reason of his conviction



that he had failed to get the desired results from the use of oxygen by inhalation, which failure he explains by the hypothesis that when dyspnœa exists the gas does not come into contact with a sufficiently large vascular area. In the course of his trial of oxygen-enemata he found that dyspnœa was decidedly and permanently relieved. The ease with which the gas was absorbed by the intestines was remarkable. It was absorbed rapidly, almost as rapidly as by the lungs, and he found that he could administer four injections of five quarts each in an hour. This suggestion opens a comparatively untried field or range of possibly useful therapeutics with oxygen and other gaseous bodies. Concerning Dr. Valenzuela's use of oxygen under the skin, the results were those of a cardiac stimulant, such as are at times desirable during the collapse that follows pneumonia and fevers of low type, cerebral congestion, and asphyxia. There was no calmative action or diminished frequency of the respirations. The arm was the part chosen for the injections, and the quantity of the gas introduced varied from a pint to a quart. Cellular emphysema was, of course, produced, and a sensation of heat was complained of, but both conditions passed away within a few hours. In the employment of the gas in this manner the author believes that he obtained his best results when the gas was in its nascent state. The *Lancet* criticises the paper for its omission to state the temperature of the gas as it was administered by Dr. Valenzuela, the earlier observations of Dr. B. W. Richardson having demonstrated the importance of having the injections warm.—*N. Y. Medical Journal*.

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#### THE MICROBE OF RHEUMATISM.

Dr. Bordas has given in *La Médecine moderne* the results of some of his researches in acute articular rheumatism, which in his opinion tend to show that the cause of that disease is a pathogenic microorganism specific in character. He reports that he has been able to isolate and cultivate a microbe which, when injected into the carotid artery of a rabbit, engendered an inflammation of the endocardium with vegetations upon the valves. He believes that acute articular rheumatism with its complications will be proved to be a disease produced by microbes analogous in their production, for example, to the *Micrococcus pyogenes*, and he is convinced that the organism investigated by him will be found by others to be the specific germ of that disease. The investigation was conducted under the supervision of M. Germain Sée, and will undoubtedly stim-

ulate parallel researches in other laboratories. These, if confirmatory, will be important as an advance, not only in etiological, but in therapeutical results. It is only a year or two since the opprobrium was felt by nearly every thoughtful practitioner when the question arose how it was that quinine cured malarial fever; and now this reproach no longer rankles in the mind since the laboratory work of Laveran has shown that the microörganism of malaria is destroyed by quinine in his test experiments; and thus the old answer of many "green-rooms," that quinine is competent to check malarial fevers by reason of the profound impression it makes upon nerve centers, is done away with. The history of this reproach makes it possible that the alleged discovery of Bordas' may in the future be the means of explaining away that other enigma—why it is that salicylic acid and the salicylates are able to antagonize the rheumatic enemy in so large a proportion of cases.—*N. Y. Medical Journal*.

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#### ANALGESIA IN INSANITY.

Dr. J. M. Keniston has a paper on this subject in the *American Journal of Insanity*, October, 1890. The best test for the presence of analgesia consists in the absence of any muscular contraction, resistance, spasm or shrinking, and of signs of distress, as facial contortions, outcries, etc., on irritating any portion of the body. This irritation may be produced by pricking with a coarse needle, pinching, the electric brush, etc. Failing by these methods to induce any manifestation of pain, it is fair to infer the presence of analgesia.

In some cases the passage of stimuli to the brain is delayed, and it may be necessary to wait from ten seconds to a minute or more before deciding positively that the pain-sense is absent. Phthisis among the insane often runs its course without pain or cough and with little or no dyspnœa.

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#### PEPTONURIA AFTER KOCH'S INJECTIONS.

According to a communication made by Prof. Koehler at the last meeting of the Vienna Society of Physicians, the toxic effect of Koch's lymph is marked in some cases by the presence of peptones in the urine of the patients who have been injected. In thirty-three out of two hundred cases the presence of peptones could be tested; also in two cases of non-tuberculous patients who had been injected for control, peptonuria occurred after the injection, though no reaction could be observed.

## SUNSTROKE AND INSANITY.

Dr. T. B. Hyslop, in the *British Medical Journal*, August 23, 1890, states that out of 1947 admissions to Bethlem, the cause of insanity in 49 (2.6 per cent.) was attributed to sunstroke. In many cases the symptoms so closely resembled general paresis as to be mistaken for it. In infancy, sunstroke is given as a cause of accidental idiocy or imbecility.

Epilepsy is its most common sequel; mental defects and convulsions are collateral phenomena. Insanity following sunstroke resembles that due to traumatism.

## LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY.

By A. W. DE ROALDES, M. D.

## WASHES AND SPRAYS IN THE TREATMENT OF NASO-PHARYNGEAL CATARRH.

By E. BALDWIN GLEASON, M. D., Surgeon in charge of the Department for Diseases of the Nose, Throat and Ear of the Northern Dispensary.

The secretions of the nasal mucous membrane are derived from its mucous glands, and also almost directly from the numerous blood vessels of the mucous membrane, especially those of the so-called erectile tissues covering the turbinated bones. Whenever a nasal discharge consists of a clear watery fluid—which in hay fever or nasal hydrops is often very abundant—the fluid comes from dilated blood vessels and indicates vasomotor paresis, and may be the reflex of irritation of some of the sensory nerve filaments in the nasal mucous membrane. In such cases, irritating astringents, especially if applied in the form of a powder, invariably do harm and increase the watery discharge. If, however, a 4 per cent. solution of cocaine be applied to the interior of the nose, contraction of the vessels is brought about and the discharge ceases. The effect of the cocaine in thus controlling the discharge may be usually maintained for several hours by following the cocaine application by spraying the interior of the nose with an atomizer containing a 4 per cent. solution of antipyrin. The nasal stenosis and excessive secretion of acute coryza are at once relieved by this treatment, which may be repeated as often as twice or thrice a day, with the result of obtaining a speedy cure of the “cold in the head.”



A patient, during an attack of fever, should be directed to saturate small pieces of absorbent cotton with a 4 per cent. solution of cocaine and place one loosely within each nostril, and to renew the application as often as necessary to obtain complete relief from his more distressing symptoms. An efficient wash for the nose and pharynx to be used by the patient at home should have the following characteristics:

1. It should be alkaline.
2. Its specific gravity should be a little less than 1027, or about that of blood serum.
3. The temperature of the wash when used should not be below 100 degrees Fahrenheit.
4. It should have an agreeable odor, taste and appearance.
5. It should be antiseptic.
6. It should be so medicated as to be appropriate to the condition of the mucous membrane of the nose and pharynx of the patient for whom it is prescribed.

The specific gravity of the wash should be about 1027, or that of blood serum, because the Schneiderian mucous membrane is exceedingly thin and vascular, and presents the most favorable condition for the occurrence of osmosis. If the specific gravity of a "nose wash" is much less than that of blood serum its use is followed by osmosis of the more fluid parts of the wash into the capillaries of the mucous membrane; while, if the specific gravity of the wash is much above that of blood serum, its use is followed by exosmosis from the capillaries of the mucous membrane. In either case there is produced an irritation of the sensory nerves of the mucous membrane, indicated by smarting sensations or actual pain lasting some moments, and soon followed by swelling of the eretic tissues and a "stuffed up" sensation in the nose.

When masses of partially inspissated mucus are retained within the nasal chambers they soon begin to undergo putrefactive changes, and the products of these changes are very readily absorbed through the thin, vascular, mucous membrane.

A 20 per cent. solution of cocaine, when applied on absorbent cotton to the nasal mucous membrane, produces a more rapid, but, at the same time, more superficial and less profound, local anæsthesia than when a 4 per cent. solution is used for this purpose.

Applying the foregoing considerations in the construction of a formula for a nose wash to be used by patients at home, we may make a wash that is bland and unirritating, alkaline,

antiseptic, and of the right specific gravity for use within the nose in simple chronic or hypertrophic catarrh:

|   |                        |           |
|---|------------------------|-----------|
| ℞ | Sodii bicarb.          |           |
|   | Sodii biborat.....     | aa ʒj     |
|   | Sodii salicylatis..... | gr. iiij. |
|   | Glycerinæ .....        | fʒj.      |
|   | Thymol.....            | gr. j.    |
|   | Menthol.....           | gr. ss.   |
|   | Aque .....             | ad fʒiv.  |

M. Sig.: Add to a quart of water and use as a wash.

If to the above formula table salt or extract of licorice (1 drachm of ether) be added, we still have a cheap and effective wash, whose solid ingredients may be prescribed as a powder, a heaping teaspoonful of which added to a pint of water will form a wash of the required strength; or the powder may be compressed into tablets of such a size that one of them added to 2 ounces of water will form an efficient wash.

Powders used as a "snuff" irritate the nose mechanically, and sometimes bring about a condition of affairs resembling that of hay fever. Simple chronic rhinitis is then, perhaps, best treated by the patient's use, two or three times a day, of a bland and unirritating alkaline wash, and the application by his physician of an alterative and somewhat stimulating solution to the inflamed Schneiderian membrane two or three times a week to bring about absorption of the inflammation within and beneath the structure. The following solution, applied to the nasal mucous membrane by means of a piece of absorbent cotton wrapped around the end of a probe, answers very well for the purpose:

|   |                     |           |
|---|---------------------|-----------|
| ℞ | Iodi.....           | gr. viij. |
|   | Potassii iodid..... | gr. xxiv. |
|   | Glycerine.....      | fʒss.     |

The solution, when applied to the Schneiderian membrane, should produce a slight amount of irritation, or the proportion of iodine and iodide of potassium to the glycerine should be increased. Treated in this manner, an apparent cure of simple chronic rhinitis can frequently be brought about within six weeks.

In atrophic rhinitis, however, where mucous glands and blood vessels are shrunk or destroyed, and the mucous membrane itself is thin, pale, lacks sensibility, and is covered by crusts of inspissated mucus, an irritant wash for the patient's use at home would seem desirable. If the proportion of water in the wash mentioned above be decreased, it becomes somewhat irritating, and its specific gravity is, at the same time, so much increased as to favor exosmosis from the vessels and thus decrease the tendency to the formation of crusts. In the treat-

ment of atrophic rhinitis, the wash should be used two or three times a day, and be of such a degree of concentration that it will produce a slight smarting sensation each time it is used. The stimulation of the atrophied mucous membrane may be maintained during the day by the use of an irritating powder, which the patient can carry in a box in his pocket and use as a snuff four or five times a day. The following formula has answered very well for this purpose :

℞ Argenti nitratis.....gr. ij.  
Amyli.....ʒiiss.

The use of washes by means of the nasal douche has been very justly abandoned as dangerous, from the fact that, if obstruction of the nasal chambers exists that interferes with the free escape of the wash from the post-nasal chamber, some of the fluid may be forced through the Eustachian tube into the ear and produce acute otitis media. In most cases of naso-pharyngeal catarrh, simply sniffing the wash from a cup or hollow of the hand through one nostril into the fauces is sufficient to cleanse the nose and naso-pharynx of their accumulated mucus. An atomizer throwing a coarse spray may also be used for the same purpose, the spray being allowed to play through the nostril into the naso-pharynx.

When diphtheritic or croupous inflammation has covered part of the mucous membrane of the nose or pharynx with a false membrane, it can often be loosened from its attachments by the use of an alkaline wash, and here simple liquor calcis answers a useful purpose in rendering the membrane more friable and easy to detach. It may be used with an atomizer, or injected into the nose of a child with a medicine dropper or small syringe, and in the same manner 1 to 2 or 3 000 solution of corrosive sublimate may be used as a germicide and antiseptic. In relaxed conditions of the mucous membrane, for example, the relaxed fauces of smokers and others, astringents are indicated. Here a solution of sulphate of copper, 2 grains to the ounce of water, used with the atomizer upon the fauces once or twice a day, gives immediate relief, and often enables the physician to bring about a cure of this annoying affection without resorting to amputation of the uvula. Where syphilitic ulcerations of the nose, pharynx, or larynx are present, zinc chloride seems to act well as an astringent. If 2 grains of the salt and 10 grains of extract of licorice be dissolved in 2 ounces of warm water, the solution may be used with the post-nasal syringe, with the result of abating any fetid odor that may be present, diminishing the discharge, improving the condition of the ulcer, and decreasing the inflammation and swelling of the surrounding mucous membrane.—*Weekly Medical Review.*



THROMBOSIS OF THE CEREBRAL SINUSES FOLLOWING  
OTORRHOEA.

The patient was 4 years of age, had had no previous illness until three months before, when a slight discharge was noticed from the left ear. Following this the child had measles. From that time he lost flesh and strength. Just previous to coming under observation he had had several severe convulsions, had been stupid, and had not spoken or taken notice of his friends. On examination, he was emaciated, tongue foul, teeth covered with sordes, bowels constipated. He was semi-conscious, and occasionally had slight convulsions, in which the left arm was chiefly affected. There was no drawing of the face; the pupils were equal; there was no squinting. No retraction of head and no tenderness.

The patellar and plantar reflexes were present, equal and normal. There was no anaesthesia or analgesia. Tache cerebrale could easily be shown. There was a purulent discharge from the left ear. The urine contained a trace of albumen. Following this there were several convulsions and a steady rise of temperature for two days. Then there was a surprising return of consciousness. Examination of the chest showed dullness and crepitation over base of left lung. One week after admission the mouth was noticed to be drawn to the left. Trembling of the left hand resembled the oscillations of paralysis agitans rather than the wide-jerking movements of chorea. When the child was lying undisturbed these tremulous motions ceased, but became exaggerated when the limb was raised, and were then accompanied by tremulous movements of the face. Death occurred three weeks from the date of admission. The post mortem showed thrombosis of the cerebral sinuses. There were numerous small abscesses in the lungs apparently from infarctions. The longitudinal and lateral sinus contained well-marked decolorized thrombi. In the latter they were soft; in the former firm. There was pus in the left tympanum and in the mastoid sinuses. There was no perforation of the membrana tympani, and there was no necrosis of the petrous bone. — *Lancet*, January 18, 1890. *Tirard: Archives of Pediatrics*, August, 1890.

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## APROSEXIA IN CHILDREN.

In the *Practitioner* (July, 1890) Ernest A. Shaw calls attention to this condition among those suffering from adenoid vegetations of the pharyngeal tonsil. Deafness and inattention result from this overgrowth. Treatment brings about im-

provement in the mental capacity far in excess of improvement in hearing—a result that tends to show that the deafness is not altogether responsible for the mental deterioration. It is well known that the intracranial veins and sinuses have communications with the veins of the frontal, ethmoidal and sphenoidal sinuses, and through these with those of the nose and naso-pharynx. Axel Key and Retzius have demonstrated that the intracranial lymphatics are in connection with lymphatics lying in the cranial nerve-sheaths, and that these lymphatics, passing from the region of the brain through cribriform plate of the ethmoid in the sheaths of the branches of the olfactory nerves, are in direct connection with the nasal and the naso-pharyngeal lymphatics, which in their turn pass to the lymphoid tissue and glands of the naso-pharynx. Thence the efferent lymphatics proceed to the lymphatic plexus of the pterygoid muscles, and from there to the anterior cervical glands. It seems reasonable to assume that there is a connection between the metabolism of the lymphatic systems of the nasal and naso-pharyngeal region of the anterior lobes of the brain, and that in the latter is the seat of the faculties of attention and observation.

Coexistent with the hypertrophy of lymphoid tissue which produces the adenoid vegetations there is found an increase of the more purely fibrous connective tissue in the immediate neighborhood. It seems not unreasonable to assume that this connective tissue, following its usual tendency to contract, causes an obstruction to the flow of lymph by compression of the lymphatics that lie in it. In this way part of the waste-tissue products derived from the metabolism going on in the cortex of the fore-brain is prevented from making its escape and remains in the cerebral cortex, thus interfering with and hindering its proper nutrition. The resulting condition expresses itself as aprosexia.

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#### CHOREA OF THE LARYNX.

DR. FURUNDARENA-LABAT, of Tolosa ( Guipuzcoa, Spain ) in *El Siglo Medico*, Feb. 15, 1891.

Mrs. Venancia de Ibieta, aged 20 years, a native of Biscay, presented herself at my laryngological clinic on July 6, 1890.

There were no morbid antecedents, no hysteria or pulmonary disease; physical examination gave no indication of tuberculosis or bronchitis. She enjoyed good health until February 19, 1890, on which day she was attacked with the *grippe*, which left her with aphonia and a dry cough; the cough had

a peculiar timbre, was whooping, continuous during the day, but stopping completely when she was asleep.

With the laryngoscope I discovered very curious, abrupt and rapid contractions and relaxations of the true vocal cords. These movements were clonic convulsions, which caused me to diagnosticate the case as one of chorea of the larynx, and I at once cast about for the cause of this parakinesia of the vocal cords.

Dr. Hack (*Berl. Kl. Woch.*, 1882) has shown how capricious is the Schneiderian membrane in producing reflex phenomena. It occurred to me that the cause of the chorea might be seated in the nose. Examination of the nasal cavity showed that the mucous membrane covering the inferior turbinated body on each side was greatly swollen, and pressed upon the septum.

In order to determine positively that the nasal trouble was at the bottom of the laryngeal chorea, I performed the following tests:

When the hypertrophied nasal mucous membrane was cocaineized the clonic contractions of the larynx ceased as if by magic. On the other hand, irritation of the pituitary membrane produced movements of the vocal cords. A small quantity of Mackenzie's caustic paste was placed upon the hypertrophied nasal mucous, and the reaction was so violent that the poor woman spent three days in great discomfort from aggravation of the laryngeal symptoms.

The hypertrophy of the mucous membrane was treated with the galvano-cautery; and when the hypertrophy was cured, the laryngeal trouble disappeared without direct treatment.

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#### PILOCARPINE IN DISEASES OF THE EAR.

Since 1880, Politzer (*Lancet*, January 3, 1891) has employed subcutaneous injections of muriate of pilocarpine in every variety of recent and of chronic affections of the labyrinth, often with excellent results. He uses a 2 per cent. solution. At first two drops of this are injected under the skin of the arm, and the dose is increased by one drop each day until eight drops are given at an injection. Soon after the injection there is increased secretion of saliva and sweat for about forty-five minutes. If there are disagreeable effects, such as nausea, giddiness, faintness, etc., they may be overcome by the administration of a small dose of atropine. The injections should be made daily. If, after two weeks, the



remedy does not produce an improvement of hearing, it must be regarded as ineffectual, and should not be continued; but if the hearing improves, the injections should be continued as long as the improvement progresses.

Dr. Politzer summarizes his opinions as follows: 1. The subcutaneous injection of pilocarpine is particularly indicated in recent affections of the labyrinth, be they syphilitic or not. 2. The injections are of little use in acute inflammation of the middle ear. 3. They are decidedly contra-indicated in cases of dry sclerotic catarrh of the middle ear. 4. Injections of several drops of a 2 per cent. solution into the tympanic cavity through a catheter are beneficial in some cases of catarrh with swelling and slight secretion. In such cases the injections should be given for from one to two weeks alternately with Politzer's method of inflation.

#### PERFORATING ULCER OF THE SEPTUM OF THE NOSE.

Dr. M. Hajek has made a clinical and anatomical study of perforating ulcer of the nasal septum. According to Hajek, perforating ulcer has nothing to do with syphilis, tuberculosis, or diphtheria.

In the superficial layers of the false membrane Hajek found, under the microscope, considerable accumulations, or heaps, of micrococci, among which were occasionally seen bacilli of variable form. Some bacilli were sometimes found in larger numbers, but Hajek regards these as due to a secondary invasion. He never found bacteria in the healthy tissues.

The necrosis of the mucous membrane is ascribed by the author to the action of the cocci, which, from all appearances, seem to be identical with the *streptococcus pyogenes aureus* and the *streptococcus pyogenes*.—*Virchow's Archiv. Centralblatt f. Bak. und Paras.*, Feb. 21, 1891.

#### DERMATOLOGY AND HYGIENE.

##### THE CURABILITY OF CANCEROUS TUMORS BY INJECTIONS OF BICHLORIDE OF MERCURY.

According to the Paris correspondent of the *Medical Press and Circular*, for September 17, 1890, Professor Poucel, surgeon to the Marseilles Hospital, suggested, in 1884, that in

order to explain the production of cancer, it would be found at no distant date that the microbe of cancer would be discovered by the microscope. Since then efforts were made to prove the parasitic origin of the disease, and some pretended to have discovered the new microbe; but soon afterward the pathogenic value of the bacilli was questioned, and it was even said that the microorganism was not necessary to explain the clinical phenomena of cancer. Assuredly, the transport of living cancerous cells by the veins, and above all by the lymphatics, would produce homologous tumors wherever those cells could find favorable conditions for germination. This mechanism, although explaining the generalization of the tumor, does not clear up the cause. The bacilli of cancer, as in the case of tubercles, exacts certain conditions which are transmissible in a hereditary sense, and which constitutes the predisposition and the tendency. When these exist, the rapid growth of these microorganisms becomes possible, and through their contact the epithelium becomes inflamed, proliferous and deformed, characterizing cancer. It was with this idea that he undertook a series of researches at the hospital of Marseilles. He had shortly before obtained a prompt cure of a malignant pustule of a very bad form by injections of corrosive sublimate around its base, and these injections proved to him, first, that the bichloride had no ill effect on the tissues; and, secondly, that it was efficacious against microbes absorbed through the lymphatics. It appeared to him, then, that it was quite rational to apply this treatment to cancer, or at least to tumors of a cancerous aspect of which the microbe (if there be one) is transmitted by the same means. Seven patients have already been submitted to this treatment, of whom the details are here given. The first was a woman without any syphilitic antecedents whom he had treated for a long time with iodide of potassium. In the month of February last, she entered the hospital for an ulcerated cancer of the right breast, which commenced ten months previously. The tumor was hard, uneven and occupied all the mammary gland; the nipple was retracted, and the ulceration occupied the under part, giving exit to a fetid and abundant discharge. The axillary glands were as yet untouched, the tumor was free, and the general condition of the patient good. On the same day of her entry, six injections (the half of an ordinary hypodermic syringe each time) of a solution of bichloride of mercury (1 in 1000) were made into the most indurated points. No salivation followed, but the breast became a little inflamed. A month subsequently the woman returned, when it was found that the tumor had diminished in volume, and another series of injections were made,

which were renewed four days subsequently. The decrease of the tumor was much more marked, and the fetid discharge of the tumor had ceased. Unfortunately, a few days afterward, the patient was carried off by an attack of angina pectoris, to which she had been several years subject. Two other patients were treated without success, but both of whom were very advanced in age, one of them being 81. The fourth patient was a retired officer. M. Poucel was called to him for a large phlegmon in the groin. After incision, a hard ganglion, of the size of a nut, was discovered, and as the man had had some dozen years previously an indurated chancre, he was ordered pills of proto-iodide of mercury. The tumor increased rapidly in spite of this, and soon attained the size of a large goose egg. The son of the patient, a navy surgeon, was called in, in consultation, and the cancerous nature of the affection was fully recognized. The first treatment was replaced by injection of the sublimate solution, a series of six every two days. At the end of three weeks all trace of the tumor had disappeared, and no return has taken place up to the present. Curious to say, the son had noticed in his own groin two small ganglions, which had dated three years back. However, about a year ago, they became much more enlarged and harder, in spite of every possible treatment. Struck with the result of injection in his father's case, he tried them on himself, and for that purpose injected four half-syringefuls daily. At the end of a week these glands disappeared. A sixth case was that of a man who said that he had something wrong with his rectum, as he had often remarked a fetid, bloody discharge from the anus. Examination revealed the existence of a malignant tumor. Four injections were made daily, and in twenty days the cancer had *vanished*. The seventh and last case was that of a woman, aged 58. She was very emaciated, and presented in the left breast a hardened, nodulated tumor, about the size of a large walnut. There was no retraction of the nipple nor any affection of the ganglions. Two injections were made, and renewed eight days subsequently. Three months afterward, Dr. Poucel revisited the patient, when no trace of the tumor could be found. Four more patients are at present undergoing the treatment, and a notable progress is marked in each of them.

In conclusion, the author says that he does not pretend that the real treatment of cancer has been found, but what he can affirm is that certain tumors of a *cancerous appearance* are susceptible of being removed by the injections in question, and the chances, as may be conceived, are much greater when



practised at the commencement. He used the words *cancerous appearance* advisedly, as in some subjects tainted with hereditary syphilis tumors resembling cancer are observed. However, in these cases, iodide of potassium is the specific, whereas it has no effect on the true cancer. Several of his patients were treated, as stated above, by that drug without result. Therefore, it may be regarded as almost certain that all the cases mentioned were real cancers.—*Pacific Medical Record*.

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#### ANTISEPTAL.

Antiseptal, or iodosulphate of cinchonia, is a brownish powder resembling kermes mineral. It is a combination of iodine and sulphate of cinchonia, being insoluble in water but soluble in ether and alcohol. It has no odor. One half of it, by weight, is iodine.

Antiseptal is used to replace iodoform, being employed in the form of a powder or mixed with lycopodium or talc. It may be combined as follows:

##### POWDER.

|                           |                     |
|---------------------------|---------------------|
| Antiseptal.....           | five grammes        |
| Lycopodium (or talc)..... | five to ten grammes |

##### OINTMENT.

|                             |                     |
|-----------------------------|---------------------|
| Antiseptal.....             | one to five grammes |
| Vaseline (or lanoline)..... | ten grammes         |

—*Le Progrès Médical*.

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#### GYNÆCOLOGY.

##### ABORTION.

[By E. S. M'KEE, Cincinnati, Ohio.]

The treatment of abortion is a subject of great importance, because it is one which is always with us, and the careful handling of the case often saves the patient from long and troublesome as well as dangerous sickness. Of great interest to me is a case which happened recently in my practice. I was called to see a woman who was seven months pregnant with her third child. She was suffering from pains and seemed to be on the verge of aborting. I prescribed dioviburnia in doses of a dessertspoonful four times a day. The threatened abortion passed off, and I was not again sent for until a month elapsed,

when I found her in the same condition as before, suffering very much pain. She begged me for the medicine which had done her so much good on a former occasion, which I gave her in the same dose with a like result. On delivering her at full term of a fine boy, she volunteered the confession that she had, on both occasions mentioned, made desperate efforts to produce an abortion, and only sent for me when her sufferings became unbearable. I have also had marked results from this remedy in other cases, but the one here presented is of the most interest. I shall continue its use further.

### THE ATMOSPHERIC TRACTOR.

#### A NEW INSTRUMENT, AND SOME NEW THEORIES IN OBSTETRICS.\*

By PETER McCahey, M. D., Philadelphia.

On December 26, 1848, and February 7, 1849, Professor J. Y. Simpson, of Edinburgh, described before the Obstetric and Medico-Chirurgical Societies of that city, a device for assisting labor which he termed an air tractor. In its first form it consisted of an ordinary metallic vaginal speculum, fitted with a piston and coated with leather at its cone-shaped end. This was finally discarded for a short brass syringe attached to an inner cup of metal, which was covered with an outer cup of rubber. The mouth of the inner cup was covered with a diaphragm of wire, within which was a piece of sponge or flannel, "with a view of preventing injury to the scalp and not allowing it to be elongated and drawn up into the vacuous space in the manner which we see occurring in the skin in the common operation of cupping. Such an instrument, when fixed to the palm of the hand, lifted readily a weight of thirty or forty pounds. This Dr. Simpson showed by experiments before this society." (Simpson's *Obstetric Memoirs*: Philadelphia, 1855.)

Professor Simpson, in his eloquent and thoughtful manner, pointed out the dangers incidental to prolonged labor and also to the use of the forceps, and declared his belief that the air tractor would eventually prove a substitute for them in many cases. He explained the well known principle of atmospheric pressure upon which it was based, and referred to the many instances in which the same principle is employed by the lower

\*Report of a demonstration before the Philadelphia County Medical Society, November 26, 1890.

animals, such as the leech, the limpet and the cuttle fish, to secure their food or to move about. He added that, while the tractor had been used in several cases "with results answering his best expectations, it admitted of much further improvement in construction, in mode of application, in working and in other details."

Unfortunately for humanity, it did not work, and was finally abandoned by its gifted inventor. So complete was its failure that, although Dr. Simpson lived until 1855, he did not publish any more in reference to it, nor is it mentioned even as a curiosity by any of his English or American contemporaries or successors.

Dr. Horatio R. Storer, the American editor of Professor Simpson's *Obstetric Memoirs*, stated in 1855 that "the chief objection to the practical use of the tractor is doubtless in its application, and not in its power of traction: the large size of the caoutchouc cup rendering difficult its introduction within the maternal passages. To this may be added the difficulty of keeping the valves in working order. Dr. Simpson, however, holds, and, we believe, correctly, that if ingenuity could suggest any form of tractor which, umbrella-like, could be folded into a little space for introduction and afterward expanded over the scalp and then exhausted by the attached piston, it might supersede the forceps in many cases. \* \* When we revert to the history of some of our most useful obstetric instruments (contrast, for example, the rude form of the early forceps with their present improved construction), we have reason to hope that the tractor may at some future time be so far improved as to be easily applied and used."

Dr. Simpson's tractor failed partly because of the difficulty of operating an air pump within the vaginal canal, and partly because of defects in the construction of the cup.

If I had read of this failure, I would probably have considered it hopeless to try further experiments in the same direction.

In common with a great many others, I had not heard or read of them until after I had, as the result of independent inquiry and over five years of study and experiments, constructed a new and entirely practicable atmospheric tractor. On learning a few weeks ago of Dr. Simpson's efforts, I was at first disappointed to find that I was not, as I supposed, the first to suggest its use. After further consideration, however, I think it will be admitted to be as great an honor to have succeeded where so brilliant an obstetrician and so able a man as Professor Simpson failed as to have evolved the original idea.



I began the study of the subject in 1885, in the hope of finding some means of preventing the annoying retrocession of the head. I at first endeavored to secure this by a modification of the old abdominal bandage; but the forces driving the head back were stronger than any other power that could be exerted with the bandage. This led me to think that there must be some other agency producing the retrocession besides muscular resistance and bony rigidity. No doubt every physician has observed many cases in which the head retroceded, not only before the pelvic muscles could act, but even before it reached the pelvic floor. Further reflection and observation led me to the conclusion that atmospheric resistance is the principal factor in producing this retrocession, and is in many cases a potent factor in delaying delivery.

When the uterus contracts round the body of the child, it forces out part of its contents, just as, when the hand firmly grasps a ball, the air is squeezed out from between it and the palm and fingers. The abdominal muscles then contract, forcing the fundus of the uterus down and pushing the child's body and head into the pelvic cavity. While this is occurring, there is a partial vacuum in the upper part of the uterus or that portion of it which is firmly contracted around the child. When the abdominal muscles relax, the pressure of the external air, and the expansive pressure of the air in the vagina are exerted against the head and shoulders of the child, and force it back until sufficient air enters the uterus to overcome or break up the vacuum and elevate the fundus. A similar process can be observed every day in the use of the ordinary ball-valve cupping apparatus. Pressure on the top of the ball drives out a certain quantity of air from the cup, but in a moment or two the expansive pressure of the remaining air forces the ball into its usual globular shape.

Professor Duncan (Duncan's *Obstetric Essays*), who must have frequently noticed this apparent anomaly, realized the inadequacy of the commonly accepted theories on the subject, and ascribed the retrocession in such cases to the "retentivity of the abdomen," but failed to perceive that this retentivity is almost entirely the result of atmospheric pressure.

Being convinced that atmospheric pressure is one of the principal causes of delayed labor, and knowing that there is nothing more easily displaceable than air, I began to work upon the problem of how to lessen or remove it during labor. I am convinced that I have succeeded and that the atmospheric tractor which I have the honor to demonstrate before you this evening will inaugurate a new era in the history and practice of the obstetric art. It will be, not only a substitute for the

forceps in cases in which instrumental aid is absolutely necessary, but it will also be an indispensable assistant in cases which are usually left to the tedious and painful efforts of nature. With it the physician can dispense with anæsthetics and reduce the expulsive stage of labor to a few minutes, instead of hours, the agony of child-birth will be reduced to an infinitesimal degree without incurring any risk or inflicting any injury on either the mother or the child, and many lives will be saved which would otherwise be lost.

The operation is extremely simple. It consists in applying a cup or concave disk of rubber or other air-tight flexible material to the child's head, and creating a vacuum within or beneath it, so that it will be firmly affixed to the head by atmospheric pressure, and then making traction on the handle of the cup or disk. Any amount of desired power can be obtained by employing a cup of sufficient area. The normal pressure of the atmosphere being fifteen pounds to the square inch, it is obvious that the tractile power capable of being exerted through a cup or disk of four square inches of area, and within or beneath which a vacuum has been formed, will be sixty pounds. The cup which I have here covers when expanded a surface of about five square inches. If the vacuum beneath it were perfect and if the surface to which it is affixed were homogeneous, polished and solidly coherent, it would furnish a tractile force of almost seventy-five pounds. Allowing 50 per cent. for the loss of power consequent upon the elasticity of the cup, the flexible character of the scalp, and the mechanical impossibility of producing a complete vacuum, there will still be left a force of thirty-seven and a half pounds, which when properly applied is more than sufficient to quickly and safely terminate any case of labor. It has been claimed that there are cases in which an enormous force is requisite, cases where the physician has been obliged to pull upon the forceps with all his force and even to ask an assistant to furnish additional power. Reflection will show, however, that in no such case has the physician exerted his entire muscular strength in endeavoring to extract the child. He may think he did, but he was involuntarily prevented from so doing, partly through the intuitive fear of injuring the mother or the child and partly by the expenditure of a considerable amount of his strength in maintaining his own equilibrium. Were a physician in any such case to exert his whole muscular force, he would pull patient and child out of the bed or haul both the bed and the patient around the room.

The large amount of force apparently required in some cases is because it is misdirected. The head is not properly

flexed, and traction is exerted in a direction that would tend to pull the occiput through the pubic symphysis, instead of under the pubic arch, and it must be remembered that a great amount of force is unconsciously expended in maintaining the grip of the forceps on the child's head, especially if traction be made at the moment when the uterine vacuum is most complete. Experiment with any globular surface will show that unless increased pressure accompany the tractile efforts, the jaws of the forceps will be expanded and slip uselessly over the body that they were intended to move.

Scientific manipulation is the requisite in obstetrics, and not great force misapplied. If the occiput be lowered so that the head can revolve or pivot against and under the pubic arch, the voluntary or involuntary contraction of the child's posterior cervical muscles will be sufficient in many cases to throw the face upward and outward and facilitate or complete delivery. If the head be in a proper position for this final upward and outward rotary movement, comparatively little force is needed to complete delivery. Professor Duncan in his researches upon the power employed in labor arrived at the conclusion that "the maximum force in the most difficult labors does not exceed eighty pounds; that the great majority of labors are completed by a propelling force not exceeding forty pounds, and that in the easiest labors comparatively no force at all is exerted, the child gliding into the world by its own weight." An examination of his calculations will show that these estimates of eighty and forty pounds are much too high. He made the mistake of confounding the result of the force employed with the force itself. His experiments, briefly stated, consisted in fastening a series of sections of the amnion over a conical vessel, the mouth of which was about sixteen square inches in area. He connected this with a water-pipe of one inch in area and found that the amnions of minimum strength were ruptured when the pressure on the water in the pipe reached four ounces and those of maximum strength when it reached three and one-tenth pounds. He then calculated that if the pressure on one square inch of the strongest membrane at the time of its rupture was three and one-tenth pounds, the pressure on the entire thirteen square inches of it, when the bag of waters was projecting through the os into the vagina, would be forty pounds. This was correct, but he erred in assuming that this forty pounds manifestation of pressure implied that there was forty pounds of force exerted to produce it. The laws of hydrodynamics and the laws of the multiplication of forces show that there is a very great disproportion between a force and its results or between the power exerted



and the weight which that power will move. A force of one pound in the tube of the water bellows will lift one hundred pounds on its surface. A man with a crowbar can move ten or fifteen tons. It may, therefore, be safely assumed that the bursting of the membranes under a pressure of three pounds to the square inch does not mean that there is a force of forty pounds or more exerted against the other end of the uterus. The proposition that eighty pounds of force is exerted in other cases as the result of muscular efforts is not much less extravagant than the assertion in *Tristram Shandy* that the force of the efforts in strong labor pains is equal upon an average to the weight of four hundred and seventy pounds, acting perpendicularly upon the head of the child. A force of eighty pounds applied to the body of an unborn infant weighing five or six pounds would be equivalent to a force of two thousand pounds applied to the body of an average adult—more than sufficient in either case to produce immediate death.

Exerted as a tractile force, eighty pounds of power will move a weight of four hundred pounds, which is more than the usual weight of the bed, patient and child combined.

The problem in labor is to move a two-pound head two inches in one direction and eight or nine inches in another, through a channel, the walls of which are soft and yielding and covered with an unctuous secretion—conditions which reduce the element of friction to the lowest point. The occiput is only required to traverse the depth of the pubic symphysis, while the forehead and chin must traverse the entire depth of the pelvic cavity and extended perineum. It is obvious that the most rational way of accomplishing this complex movement is not to attempt to make the head advance as a whole, but to move one end first and then the other.

With the forceps the head must be moved more or less as a whole along the imaginary curve of Carus. With the forceps, practically nothing can be done but to pull. Rotation may be attempted, but in trying to perform it the points of the blades may, and often do, inflict serious injury upon maternal tissues.

With the Atmospheric Tractor, nothing is more easy than to apply it to the upper portion of the head and bring down the occiput. It may then be applied to the lower portion of the cranium, and the forehead and chin may be easily drawn upward and outward, and delivery completed. If the head is caught on the pubic bone, as in a semi-frontal or brow presentation, it can be easily pushed back with the tractor, and then depressed or rotated in any desired manner before being brought down. The tractor is practically a clamp which can

be firmly attached to a large area of the surface, placing the head under the absolute control of the physician and enabling him to lift it, to turn it and to move it in any desired manner.

In order to apply it, all that is necessary is to see first that the os uteri is sufficiently dilated or dilatable to permit of its introduction. After having decided on the part of the head to which it is to be applied, place one hand against the abdominal projection, in order to prevent the head from receding, and introduce the tractor into the vagina or within the os, and firmly press it against the child's head until the handle or vacuum producer has driven out all the air from within the disk or cup. The handle can then be grasped, and extraction proceeded with. If, as occasionally happens, the head is dry, it ought to be moistened with water, or rubbed with some unctuous material.

The principal objections which may be urged against the use of the tractor are:

1. That the hair on the child's head will prevent it from being firmly applied.
2. That it is difficult to apply.
3. That its application will require injurious pressure.
4. That when applied it will exert injurious pressure.
5. That it will act as a cupping glass, producing an unsightly swelling, or even—as has been thoughtlessly asserted—"draw out the child's brains."
6. That in using it the scalp might be torn off.
7. It will carry infection.

The first of these objections I will dispose of by a practical illustration. (Dr. McCahey here affixed the tractor on the head of an infant six weeks old, and after moving it around a cot which had been provided for the purpose, lifted it up in the air two or three times, the tractor remaining in position all the time and the child apparently suffering no pain.) These, and other objections which may be raised, are based upon a misapprehension, or a forgetfulness of the laws of hydro-dynamics.

As to the second objection, as you have just seen, the tractor is not difficult of application. As to the third, the amount of force necessary to create the desired vacuum is less than ten pounds at starting and decreases to almost nothing as the air is driven out of the cup, and it is exerted, not on the head, but on the air within the cup.

The tractor can not exert injurious pressure on the head. With it on the head there is no more pressure upon the area it covers than before it was applied. It merely takes the place

of the lowest strata of air and is held against the scalp by the ordinary atmospheric pressure.

It will not act as a cupping glass, because it is applied flat against a large area, while a cupping glass is applied against a narrow circle, into which it is driven by the overlying air.

It will not produce an unsightly swelling, because there is no cavity into which an effusion can take place, and even if there were a large central opening, the brain would not be sucked up into it, because there is no internal pressure sufficiently strong to force the brain either through or against the scalp. The tractor may be applied with absolute safety over either the bony part of the skull or over the fontanelles.

There is no danger of detaching the scalp because the tractor is not sewed or glued to the skin. It is affixed against it by a certain atmospheric pressure. Traction exerted in excess of that pressure will merely result in a separation of the disk from the scalp, and not the tearing of the scalp from the bones. It can thus be seen that injurious or excessive force can not be employed with it.

It is well to remember in this connection that while we do apparently pull the head and lift the child with it, in reality we simply relieve the front of the head from the pressure of a five-inch cylindrical column of air, thereby allowing the head to be moved forward or the child to be lifted by the expansive force of the air behind or beneath it. No greater force of traction can possibly be exerted by this apparatus, because at the instant when it passes beyond eight or ten pounds to the square inch, it will separate from the head.

If the disk or cup were left on the head for a long time it might produce a slight congestion of the skin, or even a small swelling, but nothing comparable to the caput succedaneum or cephalhematoma sometimes occurring, which are the result of continuous pressure against the rigid os or the bony pelvis. Even if there were a slight discoloration or effusion, it would be certain to pass away in a few hours or days, and must not be allowed to weigh for one moment against the instantaneous relief from pain and the quick and safe delivery obtained by the employment of the tractor.

Pain is due to the resistance met with by muscular action. The resistance encountered by the abdominal muscles when pressing the head of the child against the bony pelvis is productive of intense pain. If the position of the head be changed with the tractor, and the abdominal muscles be relieved of the necessity of expelling the child, the pain ceases as if by magic.



The danger from infection is absolutely nil, if ordinary cleanliness be observed. After using the tractor all that is necessary to purify it for the next case is to place it for a few minutes in boiling water, or any antiseptic solution.

I have constructed various forms of tractors, some with a ball-valve, some with an air-cock, to which a rubber tube three or four feet long is attached, and an air pump adjusted at the other end of the tube, so that the nurse or other attendant could readily produce the desired vacuum, some with curved edges, some with concave edges; but the form I have exhibited to-night is the most readily applicable and the most reliable and best. As you see, it flattens itself out when applied to the head, thus giving an area of contact and traction equal to its entire surface. With the other forms, traction and contact can be obtained only within a limited area around the circumference.

The cups in which the air is exhausted by means of a pump or ball-valve are open to the serious objection that their valves would become clogged up with the material on the child's head, which would require that they should be taken apart and cleaned or discarded entirely after each case.

I have used the tractor in five cases, and in each case effected delivery with it in five minutes. Without it labor would have been prolonged in all for hours—hours of suffering to the mothers, and hours of more or less anxiety to the attendant. An instrument capable of producing such beneficial results is certain to be universally employed within a comparatively brief period.—*Medical and Surgical Reporter*, November 29, 1890.

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#### THE GERM OF PUERPERAL ECLAMPSIA.

The *Archives de Tocologie* publishes the researches and experiments of Dr. Emile Blanc on a pathogenic microbe found in the blood and urine of eclamptic women. A previous report on this subject was published by Dr. Blanc in 1889, in which he gave the results of experiments with cultures made from the blood of three women suffering with puerperal eclampsia. It was then found that gravid rabbits, when inoculated with this culture, rapidly went into the eclamptic condition, and abortion and death quickly ensued. In 1890 further experiments were made with the blood of two eclamptics, the blood being obtained from the tip of the finger. After eight hours in a sterilized bouillon culture, the microscope showed the development of numbers of bacilli of variable size—some short, others almost round, some isolated, and others existing

in couples, end to end. From the manner of the staining, a nucleus could be made out in the extremity of the germ. A series of inoculations was made on gravid and non-gravid rabbits with cultures from four to eight days old. In the non-gravid rabbits albuminuria, anuria, and some slight convulsive attacks followed the inoculations. In the gravid animals convulsions, albuminuria, anuria, abortion, and death quickly supervened, in some instances in from thirteen to fifteen minutes, in others in the course of a few hours. The dose given was one injection of from two to five cubic centimeters of cultures of from forty-eight hours' to five days' duration. The culture seemed to lose some of its virulence after the fourth day, as the injection of two cubic centimeters of a five days' culture produced only a slight general convulsive condition, albuminuria, and in some instances abortion, but the animal quickly recovered if no other injections were given. Microscopical examinations of the blood and tissues of the inoculated rabbits after death disclosed a microörganism identical with those of the cultures. From the various series of experiments made, the author was convinced that this germ was capable in every instance of producing the eclamptic phenomena in gravid rabbits. The second series of experiments consisted of the intravenous injection of the urine of pregnant women into rabbits. No very marked change occurred at first, but in from twenty-five to thirty days a fatal epizootic developed among the rabbits retained for experimental purposes, some of which died with convulsions. Post-mortem examinations of these rabbits showed no appreciable change from the normal, but cultures made from the blood and urine resulted in the rapid development of micro-organisms identical with those found after the inoculations. On inoculation with this culture, there resulted albuminuria, eclampsia, paralysis, and death. In every case where cultures were made from the blood and urine in this class, the typical bacilli could be reproduced. In the last series of experiments the author tested the resistance of the germ to the action of chloral. In a number of tubes containing the culture medium chloral was placed in quantities of from nine to four grammes to the litre of the fluid, without the development of any colonies. Three grammes of chloral in the same quantity of fluid showed after some days slight haziness on the surface around the drop of virus. With the addition of two grammes of chloral to the litre of the culture medium the development was not retarded in the least. An inoculation with this last culture produced the same results as if the cultivation had been made entirely without the chloral.—*N. Y. Med. Journal.*

## BOOK REVIEWS AND NOTICES.

*Text Book of Hygiene.* A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By George H. Rohe, M. D., Professor of Obstetrics and Hygiene in the College of Physicians and Surgeons, Baltimore; Director of the Maryland Maternité; Member of the American Public Health Association, etc. Second Edition Thoroughly Revised and Rewritten, with Many Illustrations and Valuable Tables. Philadelphia and London: F. A. Davis, Publisher, 1890.

This is an American text book for the American reader. Simple in its style and practical in its treatment of the subjects discussed, it appeals to the reader as a work which is remarkably free from many of the ill formed theories which have made their way into many works treating upon this subject. This second edition of the author's work is quite up to date, and contains many things which will be found of special interest to southern readers, and more particularly those who desire to become familiar with the quarantine systems of the Gulf States. The subject of quarantine is treated in this work by Surgeon Wyman, of the United States Hospital Service, and, naturally, the system of maritime sanitation practised by Louisiana comes in for a full share in the discussion, and is described by the writer as the "most extensive and efficient ever devised, and from which a number of others have been modeled." Of cremation the author says that, from a sanitary point of view, it is not necessary in this country. The real advantages of cremation, such as rapid destruction of a corpse, economy of space in keeping the remains and avoidance of pollution of the soil by decaying bodies, and possibly pollution of air and water, are more than counterbalanced by the expense and the risk of destroying the evidences of crime. Cemeteries should not be located within a city, but there is no evidence that gases exhaled from corpses are injurious to health. Indeed, the danger to health from the proximity of cemeteries is doubtless very much exaggerated. Referring to the occupations which produce in the tissues changes which enable them to resist decay after death, the author, from a dearth of examples, is constrained to refer to the saying of the grave digger in Hamlet, that "a tanner will last you nine years." This citation is apparently given in all seriousness. Now, while we are willing to pay all due deference to the expressions of the illustrious bard, we prefer testing his facetious remarks



of this kind in the crucible of nineteenth century science before accepting them as undoubted facts.

The value of this work is increased by a few good illustrations and several interesting tables. H. W. B.

*International Atlas of Rare Skin Diseases. Internationaler Atlas der Seltener Hautkrankheiten. Atlas International des Maladies Rares de la Peau.* Editors: Malcolm Morris, London; P. G. Unna, Hamburg; H. Leloir, Lille; L. A. Dahring, Philadelphia. Vols. I and II. Leopold Voss, Hamburg and Leipzig. Published in London, by K. Lewis; in Paris, by G. Masson; and in Philadelphia, by J. B. Lippincott Company.

Each volume contains three chromo-lithographic plates illustrating the rarer diseases of the skin, and accompanying the illustration is a full description of the disease printed in three different languages—English, German and French, making this a truly international work.

The diseases described are as follows:

1. Lymphangioma circumscriptum, by Malcolm Morris.
2. Ulerythema acneiforme, by P. G. Unna.
3. Lupus semisclerosus linguæ, by H. Leloir.
4. Sarcoma pigmentosum diffusum multiplex, by Ernst Schwimmer.
5. Keratoderma symmetrica erythematos, by Ernest Besnier; angiokeratoma, by Vittorio Mibelli.
6. Ulcus molle mammæ, by A. Pospelow.

The eminence of the contributors gives greater value to the work, each one contributing the weight of his authority and the result of an extensive experience in the diagnosis, pathology and treatment of the rare forms of skin disease.

This publication is the latest step in advance of a science (dermatology) which has made very great strides during the past fifteen years. H. W. B.

#### PUBLICATIONS RECEIVED.

Amygdalotomie et Hemorrhagie. Par le Docteur E. J. Moure.

Annual Report of the Supervising Surgeon General of the Marine Hospital Service of the United States for the fiscal year 1890.

A submembranous local treatment of Pharyngeal Diphtheria. By A. Seibert, M. D.

An easy method of plugging the posterior nares. By Francis L. Haynes, M. D.

Abdominal Surgery Cases. Reported by Dr. Jno R. Haynes.

Suppurating ovarian cyst. By Francis M. Haynes, M. D.

Irrigation of the puerperal uterus, its uses and its dangers. By F. L. Haynes, M. D., and Jno. R. Haynes, M. D.

On treatment of piles by injection of carbolic acid. By Francis L. Haynes, M. D.

Gynecological Memoranda. By Jno. R. Haynes, M. D.

Surgical Relief for Biliary Obstruction. By Henry O. Marcy, A. M., M. D., LL. D.

In what class of wounds shall we use drainage? By Henry Orland Marcy, A. M., M. D., LL. D.

Principles of Surgery. By N. Senn, M. D., 1890.

Heredity, Health and Personal Beauty. By John V. Shoemaker, A. M., M. D.

Transactions of the Iowa State Medical Society for the year 1890.

Transactions of the American Ophthalmological Society. Twenty-sixth annual meeting, 1890.

Transactions of the Colorado State Medical Society. Twentieth Annual Convention, June, 1890.

Transactions of the American Association of Obstetricians and Gynecologists. Vol. III. For the year 1890.

A farther study of anodal diffusion as a therapeutic agent. By Frederick Peterson, M. D.

Acute Herpes Zoster Gangrenosa, with report of two cases. By Benj. Merrill Ricketts, Ph. B., M. D.

The radical operation for hernia. With the report of two cases. The surgical treatment of epilepsy. By B. Merrill Ricketts, Ph. B., M. D.

Resection of the optic nerve. By L. Webster Fox, M. D.

The Year-book of Treatment. 1891. Lea Bros. & Co.

Plain talk on electricity and batteries. By Horatio R. Bigelow, M. D.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Ninety-second Annual Session, April, 1890.

Essentials of Practice of Pharmacy. By Lucius E. Sayre, Ph. G. Saunders' Question-compends. No. 1.

Transactions of the American Otological Association. Twenty-third Annual Meeting, July 15, 1890.

The Physician's All-requisite Time-and Labor-saving Account-book. Designed by Wm. A. Seibert, M. D., of Easton, Pa. F. A. Davis, publisher.

Diseases of the Eye. By Edward Nettleship, F. R. C. S. Fourth American from the fifth English edition.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D. Seventh edition.

Text book of Hygiene. A comprehensive treatise on the principles and practice of preventive medicine from an American standpoint. By George H. Rohé, M. D.

Twelve Lectures on the structure of the Central Nervous System for Physicians and Students. By Dr. Ludwig Edinger. Frankfort on the Main.

Transactions of the Medical Society of the State of West Virginia. Twenty-third Annual Session.

The Relation of Bacteria to Practical. An address. By John B. Roberts, A. M., M. D.

Physicians' Visiting List for 1891. P. Blakiston, Son & Co., Philadelphia.

Medical Bulletin Visiting List. F. A. Davis, Philadelphia.

The Patient's Record for the Use of Physicians and Nurses. Compiled by Agnes S. Brennan.

Imperforate Auditory Canals. By Seth S. Bishop, M. D.

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## MEDICAL ITEMS.

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### THE USE AND ABUSE OF HOSPITALS.

SIR MORELL MACKENZIE.

[*The Contemporary Review*, London, October.]

With regard to general hospitals of large size, there is a growing feeling both within the medical profession and among practical sanitarians and administrators that they are open to many objections. In the first place, they are an unscientific anachronism, the crowding together of such a vast number of diseased persons being as much out of place in cities as intramural burial of the dead. Indeed, it is extremely likely that the germs derived from such accumulation of every form of disease are more dangerous to the community than those which, after several years, may emanate from dead bodies. There is no doubt that patients suffering from different kinds of disease poison the air with their exhalations and, in many cases, exchange microbes, till recovery becomes difficult even for the strongest.

The second objection to large hospitals is that, for practical purposes, the relief which they afford may be said to be indiscriminate. This feature, from its inevitable tendency to engender and foster habits of improvidence in the poorer classes, makes it stink in the nostrils of economists. I do not hesitate to say that the out-patient department in hospitals, where the patients contribute nothing toward the expense of their treatment, is the greatest pauperizing agency at present existing in this country.

The third objection to general hospitals, as at present organized, is the cruel hardship which their indiscriminate charity inflicts on the medical practitioners in their neighborhood. These men find the competition of the hospitals simply



ruinous; for, however they may lower their fees, they must still be in the same position relatively to those institutions as the gentleman who stole the raw material for his baskets was to his rival who "conveyed" his baskets ready made.

The out-patient department is defended by the hospital authorities, on the ground that a large selection of cases is necessary for the training of medical students. This sounds very plausible, but it will not bear examination. The educational plea is only a pretext. The real reason of the laxity in admitting out-patients is the desire to make a goodly show of work in the eyes of the public, with the object—perfectly legitimate in itself—of attracting subscriptions.

The objections that have been raised to special hospitals are numerous, though careful consideration will show that, in the main, they are unfounded. The superior persons who advance these objections, ground their opposition on the alleged fact, that the special institutions draw many cases away from the general hospitals, and thus often leave insufficient material for the teaching of students. It may, however, be asked, how it is that the special hospitals attract from the older charities persons suffering from particular diseases. The obvious answer is, that the patients find that they are more quickly cured in the special hospitals. The only question, therefore, to be decided is, whether the interests of the patient or those of the teachers of the healing art are to be considered as the more weighty. I have little doubt myself, that, in the opinion of the public generally and of the subscribers to the hospitals, the welfare of the patients will take the first place.

A more practical objection to special hospitals is, that they are supposed by some people to divert subscriptions from the general hospitals. I do not believe, however, that this objection is well founded.

The bad effects of gratuitous medical relief have been abundantly shown, and it is not denied that they exist, to a very large extent, not only in London, but practically everywhere throughout the country. The time has come when the abuse must be abolished. But how is this to be done?

Aggrieved practitioners, who have had the bread taken out of their mouths by the hospitals, have sometimes said in their haste, that the out-patient department should be reformed altogether out of existence. This drastic remedy, however, would probably defeat its own object. The real remedy for the congestion of the out-patient department is depletion. All cases, in which a genuine claim to the receipt of gratuitous hospital relief can not be established, should be eliminated. For this purpose two things are necessary—viz., a definite

water-line of poverty, above which charity is not permitted to extend, and an adequate system of inquiry to prevent imposture. The difficulties of such a system of inquiry are great. But at Manchester, in the course of a few years, a well-organized system of investigation has reduced the proportion to cases in which the hospital charity is abused from 42.32 of about 6 per cent.

I approve of the Prussian law, by which all workmen are compelled to insure against sickness. The amount of insurance is  $1\frac{1}{2}$  per cent. of the wages earned. Of this, one-third is defrayed by the employer, the remaining two-thirds being deducted by him from the workmen's wages before they are paid. My own plan would be that of the Poor Law infirmaries, the hospitals and the provident dispensaries should be combined, so as to form one large system of eleemosynary medical relief, somewhat on the lines of the French *Assistance Publique*, under the control of which are all the hospitals and dispensaries in France. I am strongly of opinion that a small charge to out-patients at hospitals, carefully graduated according to the patient's means, would, of itself, do much to diminish the evils now existing. In the Prussian hospitals payment is universal. All sorts and conditions of patients are freely admitted, and the patients are divided into three classes, according to the rate of payment.—*Literary Digest*, November 1, 1890.

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#### CONFESSION OF WEAKNESS.

Whenever an effort has been made to raise the standard of requirement to be exacted of those who desire to practise medicine and surgery in Arkansas certain members of uncertain so-called sects in medicine have raised the hue and cry of persecution, and that such legislation was aimed against them and in the interest of the regular profession. The instigators of such beliefs don't seem to realize that these arguments are a confession of the weakness of their schools and alleged mode of practice (for few of them practise what they pretend). This cry of persecution and oppression is old and threadbare, but like the political bloody shirt it is the only standby of certain so-called *ism* doctors. When anything new or promising has been discovered, the regular profession has studied it carefully, investigated thoroughly, adopted what was worth having and rejecting the trash; and it has rejected much more that it is now using—much more than could be used by any profession of human beings.

The regular profession has always striven to raise the

standard of its own members, and in doing this has had neither time nor inclination to pay attention to those who dress up in certain grotesque *ism* uniforms and bark at its heels, hoping thereby to attract the attention of the populace, and cry that they have been kicked, and sue for sympathy. Those who cry persecution and oppression are challenged to prove a single case where any member of their alleged sects has been refused license, except for the same cause that would have prevented a member of the regular profession from obtaining it. The regular profession in this State is willing to have enacted a law providing that each so-called school of medicine shall be examined and licensed by members of their respective schools; provided, that each member so licensed shall be *required to practise strictly in accordance with their profession* or forfeit their license.—*Journal of the State Medical Society of Arkansas.*

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#### PROFESSOR SENN.

This eminent surgeon has recently accepted the chair of surgery in the Chicago Medical College. The alliance is peculiarly appropriate, the pioneer in advanced classical surgery becoming associated with that school, which in this country took the initiative in elevating the standard of medical education by inaugurating the three-term requirement. We invoke for the distinguished professor, in this new relation, a career of honor and success commensurate with his great deserts.—*Weekly Medical Review.*

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#### THE TRANSMISSION OF DIPHTHERIA FROM ANIMALS TO MAN.

Dr. José Brusque, of Pelotas, Brazil, reports several cases in the *Bulletin Général de Thérapeutique* of December 30, 1890, in support of the view that diphtheria may be transmitted from the lower animals to man. In the first case, a farmer had skinned a horse which had died of tonsillitis, his children assisting him in the operation. A few days after this the children were attacked with diphtheria and died. They lived out in the country, and no one in the vicinity had had the disease. The second case was almost exactly similar, except that the victim was an adult. In the third case, a number of chickens belonging to a farmer had died of pip, and had been eaten by the pigs. One of the hogs became soon after attacked with a throat trouble, and in order to prevent asphyxia, the farmer



performed a tracheotomy, his little child, five years of age, being present at the time. In a few days this child was seized with a throat trouble, and died without medical assistance. Shortly after her death, her older sister was brought to town to the writer, and was found to be suffering from diphtheria. This family lived twenty miles from the nearest settlement, and had seen no strangers, nor had any member of the family been to the town for a long time.—*Med. Record.*

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#### A NEW METHOD OF EXAMINING SPUTUM FOR TUBERCLE BACILLI.

Dr. Biedert, of Hagenau, in Alsace, has devised a new and surer method for the discovery of tubercle bacilli in sputum. He collects a tablespoonful or more of the sputum, mixes it well with a glass rod, takes some of it and stirs it together with two tablespoonfuls of water and four to eight drops of solution of caustic soda, according to the density of the sputum, and then boils it, stirring it the while in a shallow cup, gradually adding four to six tablespoonfuls of water till he gets a pretty thin fluid mass. This he allows to stand for two hours in a high glass, tapering as finely as possible downward, and all the formed particles sink with the tubercle bacilli to the bottom. Then he pours off the fluid, retaining the sediment, parts of which he takes out with a platinum needle and rubs them fine on a cover-glass. When the preparation is dry he passes it through a flame, strains it with a carbolized solution of fuchsin, and then bleaches it with 25 per cent. sulphuric acid. If there are any tubercle bacilli they remain red, and are thus distinguishable under the microscope. Even a single bacillus is discoverable in this way, whereas the older methods yielded a positive result only if there were many.—*The Lancet, February 7, 1891, p. 343.*—*The Satellite.*

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#### THE MONKEY SOLVES THE PROBLEM.

Monkeys have a keen sense of imitation and are always prone to copy their masters' movements whenever fancy strikes them. Seldom, however, is it that a monkey has proved itself useful by such an undesirable propensity. Yet one of these inquisitive creatures has, we understand, recently performed a feat in the matter of medicine-taking, and by so doing has earned for itself a reputation which deserves recog-

dition. This is how it was: A practitioner recently received a box of Count Mattei's medicines, and one of his children gave it to a tame monkey in the house. The animal very soon broke open the box, and taking a phial of anti-canceroso, which he used for a cure for leprosy, swallowed 750 globules besides some other fever medicines. The proper method of taking the anti-canceroso is to dissolve *one of the globules in a quart of water*, and the dose is a teaspoonful at a time. The monkey, however, is not only quite well, but as lively as ever, and must now be impervious to leprosy. Clearly, if the monkey had been able to read he would have been more discreet with Count Mattei's remedies, but as no harm happened to him, the presumption is that the remedies are harmless however they are taken.—*Med. Press, Dec. 31, 1890.—Építome of Medicine.*

#### A CURE FOR HAWKING.

A cure for hawking, due to accumulation of inspissated mucus in the naso-pharynx is, according to the *Omaha Clinic*, the following:

R. Ammon. muriatis,  
     Pulv. ext. glycyrrh.....aa ʒ ij.  
 M. F. pulvis.

Of this two teaspoonfuls are taken in a glassful of water on an empty stomach in the morning, every two hours during the day, and the last dose before retiring. This is continued until one single attempt at clearing the throat will cause an easy and loose expectoration, when the frequency of the dose is reduced first to every three, then to every four, and finally five hours.—*Med. Record.*

#### THE CRADLE OF INFLUENZA.

Professor Tezzier, of the medical faculty of Lyons, has returned from Russia, whither he was sent last March to take evidence upon the course of influenza there, and the various conditions of its evolution. He found that influenza is a growth of Russian soil, and when not a raging malady is a smoldering one. The way the people live in winter, locked up in heated houses; the flatness of the soil, its consequent bad drainage, and universally sodden condition when the April thaw begins; the filthiness of the farmyards, the village streets, and the rivers, which become suddenly swollen, and on fall-

ing leaves a putrid mud behind; all conduce to make influenza epidemic. Its microbe is, in fact, to be found in this mud. Dr. Tezzier calls it a strepto bacillus. What is peculiar in this disease is the alliance with this bacillus of the pneumococcus, which also lives in Russian marshes, river mud, and village pools.—*Gaillard's Medical Journal*.

#### ANOTHER CLAIMANT FOR PRIORITY.

The discovery of an anti-tuberculous lymph has appeared in the person of Dr. Neipce, a French physician of Allward, who has addressed a letter on this subject to the French Academy of Medicine. He states that he published a monograph in 1886, and refers to Cornil to substantiate his claim.

#### USEFUL FORMULÆ.

##### REMEDIES FOR SKIN DISEASES.—

The *British Journal of Dermatology*, November, 1890, contains the following valuable formulæ:

##### ARISTOL SOLUTION IN ETHER.—

|                 |          |
|-----------------|----------|
| R̄ Aristol..... | 5 parts. |
| Ether.....      | 50 “     |

##### ARISTOL COLLODION.—

|                 |          |
|-----------------|----------|
| R̄ Aristol..... | 2 parts. |
| Collodion.....  | 18 “     |

##### ARISTOL POMADE.—

|                 |          |
|-----------------|----------|
| R̄ Aristol..... | 5 parts. |
| Vaseline.....   | 15 “     |
| Lanoline.....   | 30 “     |

##### UNNA'S GELATINE DRESSING.—

|                                        |                |
|----------------------------------------|----------------|
| R̄ Oxide of zinc and pure gelatine.... | each 10 parts. |
| Glycerine and dist. water.....         | “ 40 “         |

##### FOR SYCOSIS.—

|                  |          |
|------------------|----------|
| R̄ Iodoform..... | 4 parts. |
| Lanoline.....    | 30 “     |

Leache recommends this ointment to be applied every night, and to be washed off in the morning with hot water.



## FOR WARTS.—

R Corrosive sublimate..... 1 part.  
Flexible collodion..... 30 “

To be applied once daily upon the wart and around its base.

## FOR PERSPIRING HANDS.—

R Eau de cologne..... 120 parts.  
Tinct. of belladonna..... 15 “

To be used as a lotion.

## FOR PEDICULI PUBIS.—Brocq uses a lotion composed of

R Vinegar..... 500 parts.  
Sublimate..... 1 “

This application is said not only to kill the pediculi, but also to remove the nits.

## FOR ECZEMA.—

Oleate of cocaine..... ½ parts.  
Lanoline ..... 40 “  
Olive oil..... 10 “

This is recommended by Lustgarten for the treatment of eczema of the anus and genitals. Two applications daily, followed by the use of some absorbent dusting powder, hot hip-baths and soap. For the relief of pruritus he uses suppositories containing the oleate of cocaine.—*Weekly Medical Review*.

INCREASE IN THE NUMBER OF COLORED BLOOD-CORPUSCLES  
AT GREAT ALTITUDE.

At a meeting of the Academy of Sciences of Paris, December 15, 1890, M. Viault spoke of the manner in which the inhabitants of the elevated table lands of North America are able to stand the great elevation at which they live. M. Viault in looking for a physiological explanation of the fact, came to the conclusion that an increase in the number of colored blood-corpuscles played the chief part in this adaptation of the animal organism to great altitudes: the oxygen-bearing power of the blood was thus increased. M. Viault observed a difference of two million corpuscles per cubic millimetre in his own blood, in two examinations; the first examination was made at Lima, and the second at an elevation of more than 4000 meters.—*Le Progrès Medical*, December 27, 1890.

## HERPES ZOSTER.

Dr. Matthews Beattie, New York, recommends the following treatment for herpes zoster:

Ext. Gelsem fl..... fl.  $\frac{3}{4}$  i.  
 Sod. Sulphocarbolat.....  $\frac{3}{4}$  i.  
 Aqua..... ad.  $\frac{3}{4}$  iii.

M. Sig.: Teaspoonful every two hours.

Tr. Belladonna.....  $\frac{3}{4}$  ss.

Sig.: Five drops every two hours until throat begins to feel dry.

Externally:

Rx Plumbi Acetas.....  $\frac{3}{4}$  i.  
 Alum (pulv.).....  $\frac{3}{4}$  i.  
 Aqua..... ad.  $\frac{3}{4}$  iv.

M. Sig.: Apply to painful part every two hours.—*Kansas City Med. Record*.

The Mississippi Valley Medical Association will hold its seventieth annual session at St. Louis, Wednesday, Thursday and Friday, October 14, 15 and 16, 1891. A large attendance, a valuable programme and a good time are expected. The members of the medical profession are respectfully invited to attend.

C. H. HUGHES, M. D., President,  
 500 N. Jefferson Avenue, St. Louis.

E. S. McKEE, M. D., Secretary,  
 57 West Seventh Street, Cincinnati.

I. N. LOVE, M. D., Chair. Com. of Arrang.  
 301 N. Grand Avenue, St. Louis.

THE MOST EXPENSIVE THERMOMETER in this country is in use at the Johns Hopkins University. It is known as Prof. Rowland's thermometer, and is valued at \$10,000. It is an absolutely perfect instrument, and the graduations on the glass are so fine that it is necessary to use a microscope to read them.—*Gaillard's Medical Journal*.

CHARLES DUDLEY WARNER says that the difference between the "faith cure" and the "mind cure" is that the mind cure doesn't require any faith, and the faith cure doesn't require any mind.—*Albany Med. Annals*.

## MORTUARY REPORT OF NEW ORLEANS.

FOR FEBRUARY, 1891.

| CAUSE.                           | White..... | Colored.. | Male..... | Female... | Adults... | Children. | Total..... |
|----------------------------------|------------|-----------|-----------|-----------|-----------|-----------|------------|
| Fever, Yellow .....              |            |           |           |           |           |           |            |
| “ Malarial (unclassified)....    | 2          | 3         | 2         | 3         | 5         | .....     | 5          |
| “ Intermittent .....             |            |           |           |           |           |           |            |
| “ Remittent .....                | 1          |           | 1         |           |           | 1         | 1          |
| “ Congestive.....                | 1          | 1         | 1         | 1         | 1         | 1         | 2          |
| “ Typho-Malarial.....            |            | 1         | 1         |           |           | 1         | 1          |
| “ Typhoid or Enteric.....        | 1          |           |           | 1         | 1         |           | 1          |
| “ Puerperal .....                | 1          | 1         |           | 2         | 2         |           | 2          |
| Scarlatina .....                 | 1          |           | 1         |           |           | 1         | 1          |
| Small-pox .....                  |            |           |           |           |           |           |            |
| Measles .....                    | 7          | 1         | 3         | 5         | 1         | 7         | 8          |
| Diphtheria .....                 | 3          |           | 2         | 1         |           | 3         | 3          |
| Whooping Cough .....             | 1          |           |           | 1         |           | 1         | 1          |
| Meningitis .....                 | 9          | 2         | 7         | 4         | 2         | 9         | 11         |
| Pneumonia.....                   | 22         | 21        | 27        | 16        | 30        | 13        | 43         |
| Bronchitis .....                 | 11         | 9         | 10        | 10        | 8         | 12        | 20         |
| Consumption .....                | 31         | 26        | 28        | 29        | 54        | 3         | 57         |
| Cancer .....                     | 11         | 2         | 2         | 11        | 13        |           | 13         |
| Congestion of Brain.....         | 4          | 1         | 4         | 1         | 3         | 2         | 5          |
| Bright's Disease (Nephritis) ... | 23         | 6         | 20        | 9         | 28        | 1         | 29         |
| Diarrhœa (Enteritis) .....       | 8          | 5         | 6         | 7         | 7         | 6         | 13         |
| Cholera Infantum .....           | 2          | 2         | 2         | 2         |           | 4         | 4          |
| Dysentery.....                   | 4          | 2         | 4         | 2         | 6         |           | 6          |
| Debility, General .....          | 1          | 4         | 1         | 4         | 4         | 1         | 5          |
| “ Senile .....                   | 12         | 10        | 7         | 15        | 22        |           | 22         |
| “ Infantile.....                 | 3          | 4         | 4         | 3         |           | 7         | 7          |
| All other causes .....           | 121        | 83        | 114       | 90        | 146       | 58        | 204        |
| TOTAL .....                      | 280        | 184       | 247       | 217       | 333       | 131       | 464        |

Still-born Children—White, 18; colored, 14; total, 32.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 18.21; colored, 31.77; total, 21.92.

## DIPHTHERIA RECORD FOR FEBRUARY, 1891.

| District. | CASES. |          |        | District. | DEATHS. |          |        |
|-----------|--------|----------|--------|-----------|---------|----------|--------|
|           | White. | Colored. | Total. |           | White.  | Colored. | Total. |
| 1         | 3      |          | 3      | 1         | 1       |          | 1      |
| 2         | 1      |          | 1      | 2         | 1       |          | 1      |
| 3         | 2      |          | 2      | 3         |         |          |        |
| 4         | 1      |          | 1      | 4         |         |          |        |
| 5         |        |          |        | 5         |         |          |        |
| 6         | 2      | 1        | 3      | 6         | 1       |          | 1      |
| 7         |        |          |        | 7         |         |          |        |
|           | 9      | 1        | 10     |           | 3       |          | 3      |

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.



## METEOROLOGICAL SUMMARY—FEBRUARY.

STATION—NEW ORLEANS.

| Date..... | TEMPERATURE. |      |      | Precipn. in<br>inches and<br>hundredths.. | SUMMARY.                                                          |
|-----------|--------------|------|------|-------------------------------------------|-------------------------------------------------------------------|
|           | Mean         | Max. | Min. |                                           |                                                                   |
| 1         | 63           | 67   | 59   | .14                                       | Mean barometer, 30.068.                                           |
| 2         | 67           | 76   | 58   | 0                                         | Highest barometer, 30.433, 27th.                                  |
| 3         | 64           | 69   | 58   | 1.52                                      | Lowest barometer, 29.677, 25th.                                   |
| 4         | 46           | 53   | 39   | .10                                       | Mean temperature, 62.6.                                           |
| 5         | 53           | 63   | 43   | 0                                         | Highest temperature, 80, 17th; lowest, 34, 27th.                  |
| 6         | 64           | 73   | 56   | .04                                       | Greatest daily range of temperature, 23, 12th.                    |
| 7         | 70           | 74   | 66   | T                                         | Least daily range of temperature, 6, 13th.                        |
| 8         | 71           | 76   | 66   | .11                                       | MEAN TEMPERATURE FOR THIS MONTH IN—                               |
| 9         | 74           | 78   | 69   | .03                                       | 1871.....60.5    1876.....59.0    1881.....56.0    1886.....53.2  |
| 10        | 48           | 52   | 44   | .02                                       | 1872.....55.3    1877.....55.6    1882.....62.5    1887.....65.2  |
| 11        | 50           | 56   | 44   | .04                                       | 1873.....60.3    1878.....55.4    1883.....62.9    1888.....55.0  |
| 12        | 68           | 79   | 56   | T                                         | 1874.....58.9    1879.....55.8    1884.....60.7    1889.....53.4  |
| 13        | 63           | 66   | 60   | 1.37                                      | 1875.....55.8    1880.....60.4    1885.....53.1    1890.....61.4  |
| 14        | 60           | 64   | 55   | .25                                       | 1891.....62.6                                                     |
| 15        | 64           | 68   | 60   | 2.52                                      | Total deficiency in temp'ture during month, 113.                  |
| 16        | 68           | 74   | 62   | .11                                       | Total excess in temp'ture since Jan 1, 96.                        |
| 17        | 71           | 80   | 62   | 0                                         | Prevailing direction of wind, S.                                  |
| 18        | 74           | 79   | 68   | T                                         | Total movement of wind, 8000 miles.                               |
| 19        | 72           | 79   | 66   | 0                                         | Extreme velocity of wind, direction, and date,                    |
| 20        | 74           | 80   | 67   | T                                         | 40 miles, N. W., 26th.                                            |
| 21        | 62           | 67   | 58   | .83                                       | Total precipitation, 7.42 inches.                                 |
| 22        | 54           | 63   | 46   | 0                                         | Number of days on which .01 inch or more of                       |
| 23        | 62           | 71   | 53   | 0                                         | precipitation fell, 15.                                           |
| 24        | 70           | 78   | 62   | 0                                         | TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)                    |
| 25        | 71           | 76   | 66   | .04                                       | FOR THIS MONTH IN—                                                |
| 26        | 48           | 56   | 41   | 0                                         | 1871.....1.59    1876.....8.20    1881.....5.80    1886.....1.96  |
| 27        | 43           | 52   | 34   | 0                                         | 1872.....4.77    1877.....0.98    1882.....4.04    1887.....5.58  |
| 28        | 58           | 69   | 47   | .30                                       | 1873.....1.93    1878.....3.50    1883.....1.59    1888.....11.21 |
| 29        |              |      |      |                                           | 1874.....3.08    1879.....2.13    1884.....3.16    1889.....2.78  |
| 30        |              |      |      |                                           | 1875.....13.85    1880.....4.62    1885.....2.39    1890.....2.27 |
| 31        |              |      |      |                                           | 1891.....7.42                                                     |
|           |              |      |      |                                           | Total deficiency in precip'n during month, 3.12.                  |
|           |              |      |      |                                           | Total deficiency in precip'n since Jan. 1, 1.47.                  |
|           |              |      |      |                                           | Number of clear days, 5; partly cloudy days,                      |
|           |              |      |      |                                           | 9; cloudy days, 14.                                               |
|           |              |      |      |                                           | Dates of Frost, .....                                             |
|           |              |      |      |                                           | Mean maximum temperature, 69.2.                                   |
|           |              |      |      |                                           | Mean minimum temperature, 55.9.                                   |

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, Sergeant, Signal Corps Observer.

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APRIL, 1891.

VOL. XVIII.  
No. 10.

## INDEX TO ADVERTISEMENTS.

| PAGE.                                       | PAGE. |
|---------------------------------------------|-------|
| Antikamnia.....                             | 20    |
| Arlington Chemical Co.....                  | 14    |
| Baker's Breakfast Cocoa.....                | 30    |
| Baker & Co., Jno. C.....                    | 20    |
| Baltimore Medical College.....              | 18    |
| Battle & Co.....                            | 13    |
| Bellevue Hospital Medical College.....      | 30    |
| Boehringer & Soehne.....                    | 10    |
| Bowden Lithia Springs Co.....               | 25    |
| California Fig Syrup.....                   | 11    |
| Celerina.....                               | 21    |
| Cerebro-Spinant—I. O. Woodruff & Co.....    | 23    |
| Claudel, Optician.....                      | 18    |
| Cook, Gus.....                              | 18    |
| Dioiburnia.....                             | 27    |
| Ford's Digestive Tablets.....               | 29    |
| Health Restorative Co.....                  | 4     |
| Herrick Uterine Supporter.....              | 18    |
| Kentucky School of Medicine.....            | 18    |
| Maltine.....                                | 8     |
| Marchand's Peroxide of Hydrogen.....        | 32    |
| Mariani & Co.....                           | 5     |
| Martin's Vaccinia Virus.....                | 18    |
| McDermott, A.....                           | 15    |
| Medical Dep't of the Tulane University..... | 15    |
| Mellins Infants Food.....                   | 1     |
| Moore McGregor Medication.....              | 18    |
| New York Medical Journal.....               | 19    |
| N. Y. Pharmaceutical Co.....                | 6     |
| N. Y. Post-Graduate Medical College.....    | 22    |
| Peacock's Bromides.....                     | 24    |
| Pomeroy Truss Co.....                       | 30    |
| Planten's Capsules.....                     | 15    |
| Reed & Carnrick.....                        | 20    |
| Robinson-Pettet Co.....                     | 2     |
| "Sanitas" Antiseptics, etc.....             | 1     |
| Schiffelin & Co., W. H.....                 | 3     |
| Sharp & Dohme.....                          | 16    |
| Tarrant & Co.....                           | 17-31 |
| Tasteless Quinine.....                      | 15    |
| The New Orleans Polyclinic.....             | 28    |
| The Wm S. Merrell Chemical Co.....          | 9     |
| The R. Hyde Co.....                         | 24    |
| Wagner Medical Manufacturing Co.....        | 7     |
| Wayne's Diuretic Elixir.....                | 12    |
| Wheeler's Tissue Phosphates.....            | 15    |
| COVER.                                      |       |
| Fairchild Bros. & Foster.....               | 2     |
| Fellows, James I.....                       | 4     |
| Sharp & Dohme—Chemists.....                 | 2     |

**N. B.** Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

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of Chicago.



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WHOLE No. 317.

No. 1.

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Celata virtus.*—HORACE

The

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### TABLE OF CONTENTS.

|                                                                                                          | PAGE. |                                          | PAGE. |
|----------------------------------------------------------------------------------------------------------|-------|------------------------------------------|-------|
| A Review of the Treatment of Varicocele—<br>By Frank Lydston, M. D., Chicago, Ill.                       | 821   | Medicine.....                            | 873   |
| Tennessee State Medical Society.....                                                                     | 839   | Dermatology and Hygiene.....             | 885   |
| Orleans Parish Medical Society.....                                                                      | 849   | Obstetrics .....                         | 889   |
| The Identity of Diphtheria and Mem-<br>branous Croup.....                                                | 852   | Book Reviews and Notices.....            | 889   |
| Gynecological and Obsetetrical Society of<br>Baltimore.....                                              | 858   | Necrology .....                          | 893   |
| The State Medical Society.....                                                                           | 866   | Publications received.....               | 895   |
| Surgery .....                                                                                            | 867   | Medical Items.....                       | 896   |
| A Case of Intrinsic Cancer of the Larynx<br>Treated by Thyrotomy—By J. Dundas<br>Grant, M. A., M. D..... | 869   | Mortuary Report —March, 1891.....        | 899   |
|                                                                                                          |       | Meteorological Summary, March, 1891..... | 900   |
|                                                                                                          |       | Publishers' Department.....              | 901   |

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# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XVIII.

MAY, 1891.

No. II.

## ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

### A REVIEW OF THE TREATMENT OF VARICOCELE.\*

By G. FRANK LYDSTON, M. D., CHICAGO, ILLINOIS.

Fellow of the Chicago Academy of Medicine.

In discussing the merits of the various operative procedures for varicocele, it is not necessary to take them up in detail. The *raison d'être* of many of the specially devised (?) and named operations is apparent only to the operator. The indication in all operations is to limit or suppress the circulation in the plexus composing the varix. For our purpose the various methods may be divided into

1. Acupressure.
2. Subcutaneous deligation.
3. Open deligation.
4. Deligation with resection of veins.
5. Deligation with resection of scrotum.
6. Resection of the scrotum.

The operation of resection in suitable cases is followed by relief of pain and an improvement in the consistence and volume of the affected testis. Wickham claims that he has relieved pain by resection after Vidal's method had failed.

1. The employment of *acupressure* at the present day is an evidence of a lack of faith in modern antisepsis, and to my

\*Abstract of a very lengthy paper read before the Southern Surgical and Gynecological Association at Atlanta, Ga., November, 1890.



mind is much like the Dutchman's method of cutting off his dog's tail, "an inch at a time so that it wouldn't hurt him so much." Gradual obliteration of the veins by pressure with or without ulceration has all the dangers of immediate deligation as far as sepsis and trauma are concerned, and moreover these dangers are continuously incurred from start to finish, whether the process requires a few days or several weeks. I include under the term acupressure, all the methods involving gradual severing or obliteration of the veins. The dangers of acupressure are in a measure similar to those of subcutaneous deligation shortly to be described.

2. *Subcutaneous deligation* is not essentially a dangerous operation in skilful hands. Unfortunately, however, the rank and file of the operators are not as skilful as some of those who claim such extraordinary success with this method. Simple as the various methods of subcutaneous ligation may appear, serious accidents have occurred. The operation is done in the dark, so to speak, and more tissue is included than is essential to the cure of the varix. A certain amount of cellular tissue is certain to be included with the mass of the veins, and the strangulation of this tissue is not conducive to safety. The veins, also, may not be completely strangulated. McKay says: "In the early summer of 1888 I was called in by Dr. Habib Tubagy, of Beyrout, Syria, to operate on Mr. Nasif, an unmarried carpenter of that city. Two days previous to this he had been operated on by Vidal's method, but as there was considerable swelling of the scrotum and he was suffering much pain, he desired the radical operation by the open method. After thoroughly cleansing the parts, an incision was made similar to, but somewhat shorter than, that in the former case. The wires were found inclosing the blood vessels and much cellular tissue, and not tight enough to entirely arrest the flow of blood." A portion of scrotal tissue may be included in the loop of ligature unless great care be taken. The veins being squeezed *en masse*, there is less security against secondary hemorrhage than when they are ligated separately. Scrotal hæmatocele, phlebitis, septic infection, thrombosis and embolism are possibilities. Regarding the latter, however, it is my opinion that there is more danger

of thrombosis and embolism in gradual occlusion of the veins than in their cleanly individual deligation. Subcutaneous deligation, while not so dangerous in this respect as acupressure and its congeners, is more so than a neat open operation. Strict asepsis neutralizes all possible claims for the timid and haphazard deligation in the dark. Surgeons of some experience have included the vas deferens in the loop of ligature or wire with resultant atrophy of the testis. A case of this kind has occurred in Chicago. Atrophy of the testis, however, does not necessarily imply inclusion of the vas deferens, as ligation of the spermatic veins alone has produced it. I believe that this danger of atrophy has been overrated. Severe varicocele is attended by the atrophy of the testis, sometimes to a marked degree; as the varicocele subsides, this degenerate condition becomes apparent. Tetanus is one of the possible results of inclusion of the vas deferens.

Richet, in practising the method of *enroulement*, has observed that a vein with hardened and thickened walls is occasionally found in the midst of the mass composing the varicocele, which may be mistaken for the vas deferens. He relates a case in which both himself and Denonvilliers were in doubt in the performance of Vidal's operation. Richelot cites a similar case.

Many surgeons believe that the chief danger of ligation subcutaneously is inclusion of the spermatic artery, which is deeply situated amid the mass of veins composing the varix. Ligation of this artery, it is claimed, leads to certain atrophy of the testis. This is the opinion of Gosselin, and following him, Levis, Gouley, Jenks, Malgaigne and Henry. Nicaise is also very chary of tying the artery. Malgaigne holds that it is impossible to avoid the artery and that, therefore, subcutaneous deligation is equivalent to castration. Guyon and Richelot claim that the arteries of the vas deferens and cord proper are sufficient to preserve the nutrition of the testicle.

Sir James Paget reported a case of pyæmia following subcutaneous deligation. Curling spoke of several cases of *enroulement* practised by Roux, in which death resulted. Thievenow had a case of death from septicæmia. Howe reported a fatal case of peritonitis after ligature. That severe pain and

even tetanus should be liable to occur in subcutaneous deligation is not surprising if we take into consideration the numerous and sensitive nerve filaments which supply the involved parts. The inclusion of these nervous structures in the ligature is to a great extent unavoidable. The danger is reduced to a minimum, however, by care in separating the structures of the varicocele, and including as little tissue as possible in the ligature. I do not condemn subcutaneous deligation *in toto*, and have performed it myself a number of times. In proper hands and under some circumstances it is well enough. I believe nevertheless that there are better and safer methods. There is no need of complicated needles and other devices in this operation. Juniperized silk is probably the best substance for ligature. After proper antiseptic precautions, the scrotum is gathered up in the hand and transfixed from before backward with a small tenotome; the knife is then withdrawn and the scrotum allowed to drop back in place. A fine, stiff probe (eyed) threaded with juniperized silk is now passed through the punctures between the veins and vas deferens, and passed back outside the veins still carrying the ligature, to emerge at the point of original entry in front. The probe is removed and the ligature tied and dropped. The usual precaution of rest is now taken. Any of the various special forms of needles may be used if desired. The results of subcutaneous deligation when properly performed are certainly good, a large proportion of cures resulting. This in a measure compensates for certain undesirable features of the method.

3 and 4. There is little choice between *open deligation without disturbance of the veins* and *deligation with resection of the veins, excepting possibly* (this being very remote) the additional danger of sepsis in the latter. Division of the veins with the cautery wire is as yet untried, but in spite of the favorable report of its originator (Gould), I believe it to be the most dangerous operation yet devised. The dangers of the open method are in a less degree those of subcutaneous deligation with the exception of that of inclusion of the vas deferens; this can not occur. If the open method be selected the point of election should be as high as possible, and as small an incision made as is practicable to work through.



The veins are thus ligated in their straight portion with very little mauling about of the cellular tissue. The higher up the deligation the less the danger of sepsis, cellulitis and atrophy of the testis, the latter advantage being possibly due to the avoidance of trauma of the smaller veins upon which we must rely for return circulation after obliteration of the vessels composing the varix.

In a general way it may be said that deligation at a single point in each vein is safer than at several points in the same vessel: it is also quite as effectual. The results of the open method performed in this manner are excellent and the danger under antisepsis is very remote.

5. *Deligation with resection of the scrotum* I consider to be the ideal operation in by far the majority of cases demanding surgical interference. Much depends on the method of performance: the important details as far as the danger to life is concerned affecting chiefly the deligation. Under proper antiseptic precautions I do not believe that the scrotal amputation complicates, or at least enhances the dangers of, the operation. Deligation with resection is indicated where the varix is large, and the scrotum very lax and pendulous. The removal of the latter gives the best prophylaxis against recurrence of the varix. The results are likely to be better than those attained by any of the other methods.

6. Resection of the scrotum is the safest operation for varicocele, and according to Henry is a radical cure in the true sense of the term. He reported fifty-nine operations some years ago, which, as far as he could learn, were radically successful. This same operator has since reported a number of cases at various times, for which he claims an equal degree of success. In my early experience with Henry's operation, I was inclined to accept the statement of the ardent advocates of the method without much question. A wider experience and observation has, however, convinced me that too much has been claimed for the operation. To be sure, as Henry *naively* says, it makes little difference if the operation is again necessary, after a lapse of years, as the method is perfectly safe, but this is begging the question in regard to an alleged "radical cure." In very large varico-

celes the changes in the texture of the venous walls are such that pressure and support alone are insufficient to secure restoration of their natural consistence and calibre, even though the pressure be sufficiently firm and continuous. There is little elasticity in the remaining portion of the scrotum, and the tone of the part is apt to remain as impaired as before the operation, the same constitutional conditions prevailing. It is my opinion that stretching and relaxation of the new "natural suspensory" or scrotum will occur in the majority of severe cases sooner or later. The varicocele may not be as severe as before the operation, and the more urgent symptoms may be relieved, but there is nothing edifying in the spectacle of a good sized varix a few years or perhaps a few months after a so-called radical cure. I desire to do the method full justice, however, and am free to say, that the subjective symptoms do not always recur *pari passu* with a return of the varix; but I am discussing a "radical cure" and hair-splitting is unnecessary. The patient is apt to forget the original subjective symptoms and gauge the value received by the ocular and objective evidence at his command.

In moderate varicoceles and in quite young subjects the scrotal tissues are apt to retain a certain degree of consistence and elasticity, and the veins have not usually entirely lost their normal tone. Under these circumstances scrotal resection is the ideal operation. It is far better, in my opinion, for a patient to submit to this operation than to be annoyed by suspensory bandages for the rest of his days. It is safe when properly performed and gives an ideal result.

One of the most systematic operations for varicocele is that advocated by M. Edmond Wickham. This surgeon uses the Horteloup clamp and performs the operation with the strictest antiseptic precautions. The novelty of his method consists in his mode of fastening the sutures. The sutures are passed a short distance apart and are double: at one extremity they are fastened to a thin strip of lead moulded to accurately fit the curve of the scrotum after its curtailment. The sutures are passed between the blades of the clamp before its removal. Between each suture is passed a hare-lip pin. Small sections of lead tubing are passed over the ends of the double sutures

and at the completion of the operation are clamped down firmly in a manner similar to that employed with split shot.

In describing what I believe to be the ideal method for large varicoceles it is not my intention to advocate it as a routine practice. The surgeon must necessarily at all times use his best judgment and select the operation apparently best suited to the exigencies of the case in hand. I will simply describe the method which I believe to be the safest and nearest approach to a radical cure in the vast majority of cases of pronounced varicocele. I shall not follow the usual custom of claiming a new method by virtue of some little modifications of technique. As I have already hinted, the *raison d'être* of so-called special methods usually exists only in the mind of the operator. I do not know whether this particular combination of the old and new is practised by others nor do I consider it material to the subject in hand. If it is so practised the operator is privileged to label it to suit himself, providing he will permit me to use the label.

The bowels having been emptied by a saline or castor oil, the latter being perhaps preferable, the scrotum, pubes and thighs are thoroughly scrubbed with green soap and bichloride 1-2000 and then bathed with a bichloride solution 1-1000. This completed, the patient is anæsthetized, during which process the scrotum is wrapped in a towel wet with the bichloride solution. It is hardly necessary to say that the operator is now supposed to wash his hands and remove all superfluous subungual organic matter. Everything, including the operator's conscience, being thus prepared, and all instruments having been aseptitized by boiling water, an incision, an inch or a little more in length, is made beginning just below the external abdominal ring and parallel with the spermatic cord. This is carried down until the cord and its accompanying veins are exposed. The number of veins varies in my experience; they are here quite straight and when emptied of blood quite small. The cord and veins are hooked with an aneurism needle out of the wound, which is meanwhile occasionally irrigated with bichloride solution; the veins are now separated and several of the larger ones ligated with a single ligature of medium sized juniperized silk; the ligatures are cut short and the veins and cord dropped



back in place. If there is any difficulty in reposition of the cord it is rapidly overcome by traction on the testicle. The wound is now irrigated and thoroughly dried, towels instead of sponges being used for this purpose. Sponges are far inferior to soft towels for checking oozing and for many reasons to be preferred. Several fine stitches of juniperized silk are now inserted, the wound closed and dusted with iodoform. During the remainder of the operation the wound should be compressed with antiseptic gauze by an attendant. The next step is the application of the clamp. I have used both Henry's and a modification of King's clamp,\* but any other good clamp will do. Care should be taken to divide each side of the scrotum equally, and to include sufficient tissue in the clamp. As already observed, it is well nigh impossible to remove too much. I have operated in cases where I have removed the clamp after excision of the scrotum for the purpose of ligating a vessel, and have found so little tissue left that I had extreme difficulty in covering in the testes, yet the new scrotum has not only proved sufficient, but I have wondered whether it would not have been practicable to remove more tissue. The point of election having been determined upon, the redundant tissue is quickly cut away along the face of the clamp. Juniperized silk sutures and hare-lip pins are to be used and may be inserted either before or after the excision, but always before removing the clamp. There should be as little delay as possible, as the prolonged pressure of the clamp produces more or less bruising of the loose scrotal tissues, which is not conducive to prompt union. Three or four pins are usually enough; these should be inserted at divided intervals, and the silk sutures interposed in sufficient number to prevent gaping and maintain accurate apposition. Henry covers the heads of the pins with sealing wax and embeds their points in small corks. A plan which is perhaps better and one which I occasionally practise is to pass reinforcing sutures of silver wire instead of the pins. A single strand of wire is used and its ends knotted upon small rubber buttons or fixed in split-shot. The tension is so extreme that something more than ordinary sutures is required. The secondary blade of the clamp having

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\*King's clamp is lighter and less bunglesome than Henry's.

been removed, the sutures are lightly tied and the main clamp removed. If the sutures be permanently tied before removal of the clamp the surgeon may have to reopen the wound to tie some spouting vessel. Vessels should be twisted where possible, or transversed by a suture. An assistant must now press back the testes, else they will pop out in a truly demoralizing fashion. I well remember my first experiment in this respect. I wondered where on earth I was going to get skin enough to cover those obstreperous appendages.

All hemorrhage having been checked, the wound is permanently closed. Too much care can not be taken in checking hemorrhage, as there is an especial tendency to venous oozing—the formation of a clot beneath the wound will not only prove a source of septic danger, but will prevent speedy union. There is also the danger of serious hemorrhage, of a passive character. To one unfamiliar with operations about these parts the tendency to prolonged oozing is peculiar. I have noted it for several days after a most careful operation for varicocle. The danger of hemorrhage is in a great measure dependent upon the constitutional condition of the patient, as shown in one of my cases.

The occurrence of concealed hemorrhage and formation of clot can be readily avoided by the insertion of a small drainage tube along the line of suture at the lower angle of the wound. I prefer for this purpose decalcified bone, but rubber will of course answer the purpose. Henry uses adhesive plaster as an additional support to the wound, but I have found graduated compresses to be all that is required.

Having closed the wound and made provision for drainage the parts are irrigated with the bichloride solution, dried, the edges sprinkled with iodoform and a piece of oiled silk or protective laid along the edges to prevent adhesion of the subsequent dressings. A quantity of borated cotton and antiseptic gauze, in which a hole has been cut for the penis, is now applied, and the whole secured by a three-tailed bandage, secured at the waist. A light diet should be advised and no attempt made to move the bowels for four or five days. When a movement does occur the parts should be carefully supported and a bed pan used. The sutures should not be removed for

six or seven days, or gaping will quite likely occur. So extreme is the tension when the operation is perfectly performed that gaping is quite frequent. The drainage tube should be removed in three or four days. The silver pins or wire sutures, as the case may be, can be allowed to remain for several days longer if necessary. An excellent plan where gaping occurs is the application of stout mole skin plaster, on either side of the wound; through the edges of the plaster holes are punched, and the two strips laced together with a stout silk or hempen thread—shoe string fashion. The strips of plaster should extend well out to the thighs. Although a speedy union is desirable as lessening the liability to inflammatory complications, and enabling the patient to get about soon, gaping of the wound has some compensatory advantages. The cases which heal by granulation yield a firmer support to the varix from cicatricial contraction and inflammatory thickening. This was well illustrated by one of my cases in which erysipelas occurred.

The patient may be allowed to get up in two weeks if no complications arise.

My operations for varicocele now comprise forty cases of all methods, twelve of which have been subcutaneous deligation of the veins, sixteen of simple resection of the scrotum with ligation of the veins at several points, one of open deligation with resection of the veins, one of open deligation without resection of veins and six of ligation of the veins high up with resection of the scrotum. A recital of these cases in detail would be monotonous; hence I will give only the points of interest developed by their study: I have had no deaths and but few cases in which there was serious reason for alarm. In some few instances, however, there were certain features which caused me considerable uneasiness for a time.

The youngest patient operated on was 18 and the oldest was 40 years of age. Most of the patients were between 20 and 30. The duration of the affection varied, according to the patient's statements, from one to twenty years. The question of duration, however, is not of importance, nor can it be arbitrarily settled in any case. The duration of



varicocele is necessarily a relative matter and implies the period since the condition was first brought to the patient's attention. Obviously, the sexual hypochondriac, who proverbially seeks for what he does not wish to find, is likely to discover the tumor earlier than one in whom the sexual functions are not a matter of especial concern. Patients with neuralgic manifestations referable to the cord, testes or penis are apt to discover their varix at an early period.

The causes of varicocele, as suggested by my cases, are also difficult to outline arbitrarily. Masturbation and sexual excess are the causes which usually are assigned for varicocele. Often, however, sexual excess does not appear to be sufficient *per se* to account for varicocele, but no other cause is discoverable. It is certain that only a small percentage of masturbators have varicocele. As, however, nearly all boys masturbate, it is safe to say that about all subjects of varicocele have; hence the *post hoc ergo propter hoc* argument is quite natural. I believe that I am quite safe in saying that self-abuse alone never causes varicocele, and that it is an effective cause in direct proportion as it is associated with some constitutional fault involving vaso-motor perturbation and laxity of tissues, with especial reference to the venous walls.

As illustrative of the important relation of general vascular atonicity to variocoele, one of my cases already mentioned is certainly striking. The case was under the charge of Dr. S. V. Clevenger, one of our leading neurologists, who was treating him for epilepsy. The doctor observed scrotal hæmidrosis and referred the patient to me as a curiosity. On examination I found a large varicocele, which the patient claimed was causing him great annoyance by its weight and the consequent dragging upon the cord and back-ache. On inquiry I elicited the fact that he was exceedingly hypochondrical. A peculiar feature of the case was the fact that the seminal emissions, like the sudariparous secretion of the scrotum, was heavily tinged with blood. Urethrametry revealed several strictures in the penile urethra. As the epileptic attacks were infrequent and had developed since the acquirement of the strictures—and the patient claimed since the development of the varicocele—it was thought advisable to operate. As I considered the hemor-

rhagic secretions to be a fair warning of the danger of hemorrhage, I ligated the varix subcutaneously, and at the same time performed a dilating urethrotomy. As I anticipated, a terrific hemorrhage from the urethra resulted. The bleeding continued for three days and necessitated the constant presence of an attendant who applied pressure by an ice bag during that time. There was considerable induration of the veins and a sharp orchitis following the ligature. The result, however, has been excellent so far. The epileptic attack which was expected at the time of the operation has been postponed for nearly four months. I do not say that this fact is proof of the causal relation of the stricture and the varicocele to the epilepsy. Time may show this, however. Like many operations upon the skull for epilepsy, the result in this case may be due to a temporary revulsive effect upon the nervous mechanism which has merely postponed the usual explosion. I will state, however, that the patient's general health is much better, and that he has markedly increased in weight—twenty-five pounds, according to a recent letter from him.

Several of my cases have apparently followed an epididymitis or traumatism. In how far these causes were responsible for the varix in these cases I am unable to say. Very often the only relation between epididymitis or injury and varicocele is the fact that the latter has been first discovered after these accidents. Personally I think that either of these causes may be operative. I have had one case of varicocele undoubtedly due to athletic strain, and another due to a fall. All authors I believe admit the possibility of a kick producing varicocele. In several instances I have had patients with small varicoceles who happened to be under observation, whose varices increased after an attack of epididymitis. Anything which will impair the tone of the involved part, or induce circulatory obstruction, should be operative in producing or at least aggravating varicocele.

I have operated on two jockeys, each of which attributed his varicocele to excessive horse-back riding—in one case the patient recalled an injury in springing into the saddle. There is no question in my mind as to the causal influence of excessive horse-back riding in producing varicocele. All old cav-

alrymen will support this opinion. The records of the pension office afford abundant proof. Dr. James A. Lydston, who has been connected with the pension bureau for some years, informs me that varicocele is one of the most frequent disabilities presented to the attention of the department, and that it is especially prevalent among those who served in the cavalry. How important the appearance of two jockeys is in this connection I can not say; it may have been a coincidence, and I am unable to state that the prevalence of varicocele among jockeys is a matter of comment. Other things being equal, they would be less likely than other riders to injure themselves, as they ride on plain saddles, and they can not therefore experience the disagreeable effects of a blow with a pommel. Jockeys, as a class, are young, healthy, light-weight subjects who are well kept and not subject to vascular debility.

The symptoms for which the patients upon whom I have operated have sought relief have varied. In several instances the principal annoyance complained of was the deformity. One of my patients, for example, was annoyed by the frequent comments which were made upon his appearance, his varicocele being so bulky as to be quite prominent, even when his trousers were amply large. There was no other symptom in his case which was of any particular moment.

In several other cases there was noticeable deformity, but associated with it were sexual hypochondriasis and various reflex disturbances. In some instances mechanical discomfort has been chiefly complained of. In several cases intertrigo, and in one instance severe chronic eczema, constituted the chief source of annoyance. Pain in the back, shooting pains along the cord and penis, and neuralgia of the testes have been frequent. In some cases irritability of the bladder has been complained of. In nearly all instances sexual hypochondriasis, with or without spermatorrhœa, has been pronounced. I do not wish to be understood as asserting that all the symptoms for which the patients sought relief were necessarily dependent upon the varicocele. The nocturnal pollutions, spermatorrhœa and prostatorrhœa, might have been due in many of my cases, not to the varix *per se*, but to the same underlying cause as the varix. In several instances the principal symptoms were not removed by the operation.



In but one case have I had sufficient hemorrhage to give rise to any particular annoyance. In this case there was a tendency to hemophilia. This, with my failure to use a drainage tube, resulted in a concealed hemorrhage, the formation of a clot and, after removal of the latter, free passive oozing for some days. In this case there was the most extensive ecchymosis that I have ever seen, the tissues from the umbilicus down to the middle of the thighs being as black as extravasated blood could make them. The result, although alarming in appearance, was not a matter of concern, but the patient became very much frightened at what was apparently, as he expressed it, a general mortification. A tendency to ecchymosis exists in all cases of operation for varicocele and this should be remembered, else both surgeon and patient are apt to be demoralized by the consequent appearance of the parts. In several other instances there has been a tendency to oozing for some days, thus precluding the possibility of primary union.

The use of the drainage tube is in my estimation one of the most valuable points in all operations involving resection of the scrotum. Concealed hemorrhage, tension and sepsis are not liable to occur when the tube is used; there is unquestionably danger of these accidents without it. As long as marked oozing persists the tube should be allowed to remain. Should severe hemorrhage occur after the operation has been completed, the tube facilitates hot water irrigation or the application of styptics, the former being the best hæmostatic.

The healing of the wound in a fair proportion of my cases of resection of the scrotum has been by first intention; but I have found that there is in many cases a tendency to gaping, even though the sutures be allowed to remain for a week or more. Indeed, I am inclined to believe that when there is no tendency to gaping, hardly enough scrotum has been removed. The gaping is always due to the extreme tension upon the parts incident to a thorough operation. It may be prevented in many cases by allowing the sutures to remain in for some little time. If juniperized silk and silver wire be used as I have suggested, the stitches can be allowed to remain in from five to eight days with impunity.

In several instances, I have had slight sloughing of the scrotum, evidently from extreme tension. In these cases, however, the result has been even better than those in which primary union occurred. No matter how much tissue may slough the parts become covered in by an excellent scrotum with almost marvelous rapidity. Although the fit is decidedly snug at first the testes soon accommodate themselves to their new investment. I have never seen a more delighted patient than one of mine in whom cellulitis occurred as a consequence of infection after operation.

I recall a case of cellulitis of the scrotum—not, however, following operation—that occurred some years ago in the New York Charity Hospital, in which the testes were bared completely, yet by judicious strapping and occasional stimulation of the granulations a good scrotum was finally secured. I saw several other cases of scrotal cellulitis in the New York State Emigration Hospital during my term of service in that institution. Contrary to the rule in such cases, none of these died. In all there was extensive sloughing of the scrotum, but repair, once begun, was very rapid. Such cases teach us that in resection of the scrotum there should be little fear of excising too much tissue. The more excised the better the result; and while it is always desirable to obtain primary union where possible, I feel justified in saying that the more gaping the better the result. Cellulitis—*i. e.*, erysipelas—is not a source of danger in resection of the scrotum, unless direct infection occurs. This was the explanation in one of my hospital cases already mentioned. The failure of the wound to unite promptly is undoubtedly in some cases of scrotal resection due, in a measure, to the prolonged pressure of the clamp. Sloughing may be partially explained in this manner. As I have already remarked, my faith in resection of the scrotum as a radical cure for varicocele has been somewhat shaken by several of my cases. In one instance I have had an opportunity to watch the gentleman for nine years since the operation, and although I removed all the tissue necessary to an ideal operation in this case, the varix, which was a very large one, has recurred, and is now nearly as large as ever. The symptoms, however, for which he sought relief, have not returned.

In two other cases there has been a moderate recurrence. The objection may be urged that I have not taken off enough scrotum. My conscience is clear upon this point, however, as I have invariably taken off all I could in reason and still retain a covering for the testes. A case has recently come under my care which a celebrated western surgeon reported as a radical cure by scrotal resection seven years ago, and is now as bad as ever.

My operations of subcutaneous deligation have been successful, but on the average has given no more uneasiness and trouble than those in which I performed the open operation. Induration, pain and orchitis are some of the disagreeable features which I have experienced from this method of operation. I have found that the operation of tying the veins low down is much more objectionable from this standpoint than that involving ligation higher up as in the combined operation which I have recommended. It is obviously safer to ligate the veins at their comparatively straight portion, where the changes in the vascular walls are at a minimum, and there is the least necessity for mauling about the investments of the testes and tearing up the planes of areolar tissue. I have already given my reasons for advocating the combined operation. In one of my cases of combined operation, I ligated the vessels at several points rather low down. This patient did fairly for two weeks, when he arose against orders, or over-exerted himself when allowed to sit up. As a consequence, phlebitis, cellulitis and consequent slight supuration developed. During convalescence this patient had a severe attack of the *grippe* with marked pulmonary symptoms, hæmoptysis being profuse, giving me great apprehension of pyæmia with embolic pneumonia, etc. Although never very strong-lunged, this patient perfectly recovered.

In four or five cases stricture existed and urethrotomy was performed simultaneously with the operation for varix. I can see no objection to this procedure, and I have had but one case in which the operation upon the urethra afforded any complication. This instance, already alluded to, was one in which severe urethral hemorrhage resulted.

Two cases have come under my observation which sug-



gested the possible development of hydrocele as a result of operation for varicocele. In one of these cases, operated on by me several years ago by subcutaneous deligation, I again operated on a short time since for an encysted hydrocele upon the same side. In another instance I operated for hydrocele in a case in which subcutaneous deligation had been previously performed for varicocele on the same side by another practitioner. The patient was complaining of the same symptoms, according to his statement, that had characterized the original varicocele. My operation for hydrocele, though perfectly successful *per se*, has not yet relieved the symptoms from which he was suffering. He is now giving me a great deal of annoyance by his complaints of severe neuralgia of the testicle. The irritation of sunken sutures, which had accidentally traversed the tunica vaginalis, or obstructed venous circulation plus irritation, might account for these cases. In ligating low down the tunica vaginalis is apt to be quite roughly handled, if not actually traversed by the ligature. Acute hydrocele is a very frequent element in the swelling resulting from ligature of the varix. As already remarked, the testis itself may be involved. Injury of the fascial envelopments of the cord high up is not important, and is a necessary factor in the operation which I have suggested.

I have never performed an operation for double varicocele. Indeed, I have met with no case which to my mind required such operation. Even though a case of double varicocele should apparently require a double operation, I should hesitate to incur the risk of atrophy of both testes. In ordinary single operations the risk of atrophy is doubtless overrated. This is probably due to (1) the relative appearance of shrinkage incidental to the subtraction of the swelling of the varix *per se*. (2) Continuation of atrophy, which was steadily progressing prior to operation. (3) Atrophy due to embolism, syphilis, epididymitis, etc. Theoretical considerations, however, do not always mollify the patient where atrophy of the testis occurs. It will be remembered that Delpech was assassinated by a man upon whom he had performed a double deligation for varicocele some years before. On autopsy the murderer's testes

were found to be soft and shrunken, presumably from the operation.

I have had no case in which atrophy of the testes has followed an operation, and have had several of scrotal resection in which the testes became firmer and larger after the operation. Among my cases was one of scrotal hæmatocele, resulting from the injury of large varicocele. In this case suppuration occurred, and I was obliged to lay the part open, and as soon as it was healthily granulating I removed the pendulous scrotum with an excellent result. While I have not been able to follow all my cases for a great length of time, the immediate results have been eminently satisfactory, and in those cases which I have been able to follow for a period of several years I have had no occasion to regret the operation. In the majority of instances the relief obtained has been so marked that the patients were greatly delighted. That this was always a physical result of the operation I do not claim, nor do I think under the circumstances that it is a question of great importance.

In general I have found that the combined operation of high ligation of the veins with resection has been much better from the standpoint of economy of time than the subcutaneous or ordinary open operations of ligation. Painful induration and swelling of the testes with consequent disability and impeded locomotion are very frequent in my experience when these operations of deligation have been performed.

In nearly all of my cases there has been a marked improvement in the patient's mental condition. Hypochondriasis has been relieved and sexual vigor improved or restored. Pain has been relieved in most instances. A notable exception is the case already mentioned, in which hydrocele followed an operation for varicocele and severe pain persisted after cure of the hydrocele.

## PROCEEDINGS OF SOCIETIES.

## TENNESSEE STATE MEDICAL SOCIETY.

*Fifty-Eighth Annual Meeting, Held in Nashville, April 14,  
15 and 16, 1891.*

## FIRST DAY—MORNING SESSION.

The Society met at Watkins Hall, and was called to order by the President, Dr. Geo A. Baxter, of Chattanooga, at 10:30 A. M.

Prayer was offered by Rev. C. D. Elliott, of Nashville. Dr. T. J. Happel, of Trenton, read a paper entitled

*Abscesses.*

He said the field is a profitable one for thought and investigation, especially in the direction of diagnosis. So far as the treatment is concerned the Latin expression *ubi pus, ibi incisio* gives us the therapy of such cases in a few words, so far as their last stages are concerned. The prophylactic treatment is a different matter. Everything that can be done to prevent pus, to prevent the development of an abscess, must be resorted to, but when pus is present the knife is the instrument for relief. An aspirator can remove the pus itself, but the cause of it, the pyogenetic something, is left behind. A free outlet must be given to the pus, the cavity carefully cleaned, perfect drainage secured, arrangements made for thoroughly flushing the diseased organ with antiseptic fluids, the strength of the patient maintained by a generous diet, and nature aided by an abundance of pure fresh air to repair the broken down constitution.

Dr. Happel reported a case of abscess of the spleen. This was a rare trouble, many of our best authorities never having met with a single case. He has in the course of seventeen years' practice found two cases; one due to pressure upon the organ; and the other to chronic malarial poisoning. He also reported a case of abscess of the cornea forming hypopyon, and one case of abscess of the liver which came under his observation. In closing he called the attention to the peroxide of hydrogen as one of the best, if not the best, of all agents, used to cleanse and restore to a normal state all pyogenic membranes, surfaces and cavities. As one writer expressed it: "It hunts out pus in all its ramifications as a ferret does a rat."



## FIRST DAY—AFTERNOON SESSION.

Dr. George R. West, of Chattanooga contributed a paper on

*Ovulation and Menstruation.*

Individual opinions and theories are as those who love darkness rather than light and insist upon remaining in darkness rather than to be disturbed by the entrance of facts which might bring light. The subject of ovulation and menstruation, their dependence or independence, is one of these benighted fields where individual opinions and theories run riot, and where the light of facts gained from research and experience is so perverted as to render uncertain the supposed certainty that has previously existed.

After giving a *resumé* of the literature on the subject, Dr. West drew the following conclusions:

1. That the increased familiarity with the pelvic organs, the result of modern surgery, has not materially added to our knowledge of their functions.

2. That though the ovular theory of menstruation has not been overthrown, yet the weight of accumulating evidence seems against it.

3. That the most recent observations point to a common nervous origin for both ovulation and menstruation, and yet an individual independence.

Dr. Thomas M. Woodson, of Gallatin, followed with a paper entitled

*Treatment of Pneumonia; the Past and Present Methods; Has the Rate of Mortality been Changed?*

He briefly reviewed the literature on pneumonia to illustrate the opinions of medical teachers and authors. He was glad that Hare, of Philadelphia, in his work on "Practical Therapeutics," revived the old lines of treatment. He extolled the *veratrum viride*, and said that in the first stage of the disease it is very useful as a medicant. Its two alkaloids possess different influences and that between them they fulfil every object that is sought after. *Fervine*, a powerful vaso-motor depressant, relaxes the walls of the blood vessels everywhere; at the same time it quiets the action of the heart by an action over its muscle or ganglia as to reduce its force, thus preventing engorgement of the lung; while *veratroidine*, by stimulating the inhibitory nerves of the heart, also slows its beat, fills the ventricles and allays excitement. The advantages of *veratrum viride* are its completeness and rapidity of action; the fact that it preserves in healthy blood vessels the

blood which may be needed in the crisis, if the disease is not aborted; and its safety is a point largely in its favor. He said that in the second stage to prevent heart failure by engorgement from over-distention Dr. Hare gives digitalis with strychnine to stimulate the respiratory centers; that he thinks alcohol in the second stage is inferior to digitalis; carbonate and muriate of ammonia are valuable adjuncts in the second and third stages. He uses opium sparingly for troublesome cough in the later stages, and not in the first stage.

In the first stage of croupous pneumonia the indications are clear:

1. To control the circulation and diminish the determination of blood to the lungs.
2. To reduce the temperature if high.
3. Allay pain by rest, physical and physiological.
4. To support the vital powers.

The first two indications are met by veratrum viride better and with more certainty than any other. The third, to allay pain, we have but one remedy—opium or its salts, which stands without a rival. Fourth, to support the patient with especial reference to failing heart and respiratory centers: digitalis, strychnine and alcohol for the latter stages.

More than twenty years ago the speaker expressed the opinion that in inflammatory affections veratrum viride was a sedative of the greatest value, controlling the action of the heart as effectually as blood-letting, without the exhaustion that must follow the loss of blood. Arterial excitement is reduced by it, while the vital forces are economized. It is especially adapted in pneumonia in the stage of engorgement, in which it appears to bring about prompt resolution. It may be used in the treatment of children with safety. Its constitutional effects having been secured, there is a reduced force and frequency of the circulation, reduction of temperature and respiration, and an amelioration of all the symptoms of the disease. While extolling the virtue of veratrum viride, he would not rely on it alone in pneumonia, as opium was unquestionably entitled to a prominent place, palliative in its action, allaying pain, cough and nervous irritation, available in the latter as well as the early stages.

### *Phthisis Pulmonalis, with Especial Reference to Prophylaxis.*

This was the title of a paper read by Dr. J. R. Buist, of Nashville.

As physicians, impressed with the claims of suffering humanity, we should never relax our efforts as long as consumption, with its multiplied ills, afflicts our race with its sick-

ness, pain and death. Nor have we any right, as scientists, to despair of the ultimate triumphs of knowledge and the practical results of scientific research. The acknowledged failure of all the proposed plans for the cure of phthisis, based upon therapeutical agents, should lead us upon other lines of effort for its destruction. The impossibility of procuring for the mass of consumptives the benefits of climate and altitude, even if these benefits approximated the value some assign them, should also admonish us to look to the higher plane of preventive medicine in dealing with this disease.

Regarding Koch's tuberculin or parataloid as a remedy for consumption, Dr. Buist said the high expectations so recently excited in these inoculations do not seem to be verified. Certainly for advanced stages of phthisis and many other conditions of tuberculosis it is unsuited, and positively dangerous; and it is not settled whether any benefit can attend its use in the incipient cases. In making this statement he would not detract anything from the real value and merit of the discovery, and meant no disparagement of the genius of Koch.

Preventive medicine is after all the acknowledged aim and end of scientific research. Though still in its infancy, it has accomplished wonders for humanity. And it is obvious that its first and highest triumphs are to be won among the class of zymotic and infectious maladies. The power of prevention is incalculably more precious than any therapeutical measures. It is therefore highly incumbent upon us individually and collectively, first, to assure ourselves of the modern theory of consumption, and so convinced, we should direct our attention and efforts to a rational prophylaxis of this fatal disease.

It may be said that the true difficulty is to get the public to realize its danger from various sources, and still more to have wise prophylactic measures adopted. This is in the main true; yet education can perform wonders. The benefits of sanitary reform are now acknowledged and trusted, although fifteen years ago it met with indifference and opposition. It was thought to be a direct attack upon the rights of the citizen. When first inaugurated in Nashville it encountered opposition from every quarter.

The speaker closed with the words of Dr. E. O. Shespeare, of Philadelphia: "What can and should be done to limit the prevalence of tuberculosis in man? What use was it for Koch to have made his discovery of the infectious nature of the bacillus tuberculosis, if the practitioners of medicine, those who come in direct contact with the people, who are the natural agents for arousing such a public sentiment and enforcement of laws for the protection of public health, utterly



neglect to act upon the ample and exact knowledge which we possess concerning the etiology and prophylaxis of tuberculosis?"

FIRST DAY—EVENING SESSION.

The public were invited to attend this session. Addresses were delivered by Hon. William Litterer, Mayor of Nashville; Hon. H. H. Norman, and Judge J. M. Dickinson. Dr. Geo. A. Baxter also delivered the President's Address, taking for his subject, "Topics of Import to the Profession and Public." The address was scholarly, very instructive, and was listened to with marked attention.

SECOND DAY—MORNING SESSION.

Dr. J. S. Cain, of Nashville, read a paper on

*Chronic Endometritis.*

He said the question as to the localization of the chronic form of endometritis is rendered more prominent than that of the acute form on account of the conflicting opinions entertained by distinguished authors and teachers. None, he believed, questioned the very frequent occurrence of chronic cervical endometritis, but Drs. Emmett, Bennett and other very distinguished authorities almost absolutely ignored the existence of chronic corporeal endometritis as a special disease, and consequently, except for the relief of hemorrhages, and to meet temporary emergencies, discountenance all intra-uterine medication, relying entirely upon treatment directed to the uterine os and vault of the vagina. But the preponderance of medical authority is adverse to the opinion entertained by these gentlemen, and with the latter class he was entirely in accord.

Chronic endometritis and the conditions necessarily allied therewith are the most common as well as the most important diseases with which the gynecologist has to deal. This condition is often a sequel to the acute form of the disease, and grows out of repeated acute attacks. It matters not how or from what source the acute outbreaks originate, whether from catarrhal, specific, traumatic or internal constitutional causes, they are often, but not always, the starting point from which not only the endometrium, but the entire uterine and peri-uterine parenchymatous structures become involved. He would here venture the assertion, that while the change in structure and function of the lining membrane of the uterus often seem to be the most prominent conditions, and those which demand our first and most careful attention, this tissue is probably never chronically diseased without a corresponding involvement of the entire uterine structures.

Treatment with the curette, as has been said, is a blind instrument and capable of doing much harm in careless and incompetent hands, yet for the removal of fungoid vegetations and adenoid degenerations from the endometrium, affords the surest, speediest and safest means as yet devised. Dr. Cain is accustomed to follow the curetting by an application of Churchill's tincture of iodine or diluted carbolic acid, as is the usual practice, and always precedes the treatment by a careful washing out of the vagina and uterus with a solution of corrosive sublimate, 1 to 2000.

In cases where this treatment is not admissible, or where it has failed to afford relief, his next reliance is on the electro-chemical action of negative galvanism, in removing the vegetations after the method of Apostoli. This is accomplished by introducing an electrode, insulated to near the point into the uterine cavity, and connecting with the negative pole of the battery, connecting the other pole with a large pad of moistened potter's clay, sponge or prepared cotton, placed over the abdomen. The time for employment of the galvanism at each treatment should be from ten to fifteen minutes, and the treatment should be repeated about twice a week.

The strength of the current employed will depend much upon the acuteness of the particular case, and the susceptibility of the patient to electrical treatment. The chronic cases always require the stronger current. The dosage may be fixed at from ten to three hundred milliamperes; the minimum is, in his judgment, too small to accomplish any results, and yet physicians with much larger experience than himself have had to employ it.

This line of treatment he considers free from many of the objections to others; is is cleanly, free from pain, and exempt from danger. Unlike cauteries and escharotics it can be limited in its influence and produces no deleterious effects upon the sound tissues, nor does it leave a raw and exposed surface like the curette to absorb poisons and septic agencies, and while it removes the vegetations it imparts renewed tone and vitality to the diseased organ.

#### SECOND DAY—AFTERNOON SESSION.

Dr. A. J. Swaney, of Gallatin, contributed a paper entitled

*Retained Placenta in Miscarriage; How Shall We Treat Such Cases?*

He said the dangers from retained placenta in miscarriage were hemorrhage and septicæmia. When the delivery of the

placenta is prolonged ought we still to abstain—ought we to wait or ought we to interfere actively in order to forestall these dangers which almost certainly will result and further interfere at a time when it is far easier than later, when we may be forced to action? Those who favor active interference are Tyler Smith, Murray, Simpson, Leishman, Mundé, Grandin and many others. The reasons given for active interference are the frequency of these dangers in prolonged delivery of the placenta. Simpson directs that if the cervix is dilated or patent to act at once; if it is not dilated he dilates it at once. The woman is then anæsthetized, the uterus depressed as much as possible by the external hand and with the index finger of the other hand he removes the placenta and membrane. If he can not sufficiently depress the uterus with the hand he does not hesitate to forcibly drag it down by a double tenaculum fixed in the cervix. Mundé and Grandin, of New York City, go still further and curette the cavity of the uterus with special instruments made for the loosening of adherent placenta and its removal from the uterus.

The authorities who counsel waiting for serious complications before interfering are just as many. We mention Ramsbotham, Davis, Burns, Fleetwood, Churchill, Grailey, Hewitt and many others. Active intervention does not mean unnecessary interference. Nature is ever to be given a chance, but when we see that her efforts are futile, certainly it is but rational to assist her, and this should be done as directed by Mundé, by placing the woman in the left lateral position, and with a dull wire curette remove the placenta, or any part of the secundines that may remain, through a Sims speculum. This is far better and easier than the method advised by Simpson of dragging or pressing down the uterus and introducing the finger into the uterine cavity. The uterine cavity should then be washed out with hot water, slightly carbolyzed, through a Janeson's uterine douche, and this should be repeated every six or eight hours until all fetor disappears from the lochial discharge.

Hemorrhage after miscarriage, even when we believe the placenta and secundines have been removed, invariably means retention of a part of the placenta or secundines, said the speaker. Profuse hemorrhage may occur for weeks from this cause, and in such cases we should boldly explore the uterine cavity and remove any offending matter that may be present. In the first twelve weeks of pregnancy the dangers from hemorrhage and septicæmia are not so great and the expectant plan is more justifiable. After the third month it is criminal negligence to wait and subject a woman to the dangers arising



from retained placenta when she can be relieved by an operation which, if properly done, can do no harm, and spare her the risk of hemorrhage and septic poisoning. In short, the author believes the early removal of the secundines is easy and safe and forthwith guarantees the woman against the dangers of hemorrhage and sepsis.

Dr. J. L. Jones, of Bells, read a paper on

*Indigo as an Emmenagogue,*

in which he said his attention was first directed to this drug as an emmenagogue in July, 1887, from an essay published in the Medical and Surgical Reporter, of Philadelphia, by Dr. S. L. Gount, of Lafayette, Ind. Acting on the suggestions offered by Dr. Gount he had used it in many and various cases.

His first case was a young lady, 20 years of age, who had not menstruated in five months. He had been treating her for three months with the usual remedies without any effect, so he made up his mind to give indigo a trial, which he did with the following result. He ordered indigo  $\mathfrak{z}\text{ij}$ , subnitrate of bismuth  $\mathfrak{z}\text{ss}$ , well mixed. She took one-half teaspoonful in one-third of a glass of water three times daily for nearly four weeks. One day he was sent for in great haste to see his patient. On his arrival he found her on the bed, and comfortable. Having asked why he was so hastily called, he was told by the mother that her daughter, while walking in the garden, without any pain or warning of any kind, began to flood. The gush was followed by a gentle flow which lasted only for a little while. In five days she was well, and has not suffered from amenorrhœa since.

Dr. Jones has since used indigo in thirteen cases with but one failure, and that lady proved to be pregnant.

During the administration of the drug the os uteri becomes soft and patulous, admitting the end of the index finger. There is often a serous discharge from the vagina. The urine becomes brownish green in color, and its odor is offensive. The stools are watery and offensive.

THIRD DAY—MORNING SESSION.

Dr. J. A. Witherspoon, of Columbia, read a paper on

*Diabetes,*

confining his remarks principally to diabetes mellitus. He said the term diabetes mellitus is a symptomatic one, being a deviation from health in which the processes of nutrition are seriously deranged, and presenting a group of complex symptoms, the most conspicuous of which are—first, frequent mic-

turition, passing large amounts of pale saccharine urine. Coincident with this is a most insatiable thirst and dryness of the mouth and fauces, which is by far the most annoying symptom, the freest drafts of water giving but little or no satisfaction. The skin becomes dry and harsh, with complete absence of perspiration; and followed by a general pruritus, sometimes impossible to relieve. These were some of the many symptoms of the malady.

The etiology of the disease is yet an unsolved problem. It is an affection of adult life, but few cases being reported in children, and those always fatal. The only recovery reported, so far as the speaker is aware, was a girl 12 years of age.

The treatment is conveniently divided into dietetic, medicinal, and the hygienic. The dietetic is by far the most important. We must exclude from the bill of fare all food-stuffs containing starch or sugar, for two reasons: (1) The normal action of the liver in its glycogenic function is seriously deranged and incapable of oxidizing the maltose sent to it by the digestion of carbohydrates, and they are therefore useless aliments. (2) They seem to aggravate and increase the glycosuria. A strict meat and green vegetable diet agrees better than any other. Some give milk, others forbid it entirely. He had found in a few cases he had treated that it was impossible to continue for long periods any one diet. The pure skim-milk diet is meeting with much favor. Alcohol, and all spirits, except small quantities of light wine or beer, must be forbidden. This regimen alone will lessen the quantity of sugar eliminated, but it is necessary to use in connection certain medical treatment.

The drugs giving the best satisfaction are opium, or its alkaloids, morphia or codeia, ergot, arsenic and many others. Of all the drugs mentioned, codeia has been by far the most satisfactory in his hands. It was first suggested by Dr. Pavy, of London, and has the great advantage over its sister alkaloid—morphia—in not producing sleep. It is more efficient, less dangerous, and does not produce the troublesome constipation caused by morphia or opium. Next to it, the speaker would place ergot for its physiological effect upon the blood vessel walls. Recently, sulphonal and antipyrine have been used with reported good results. He had never used antipyrine for the reason that it is recommended in from thirty to sixty-grain doses. He did try sulphonal in ten-grain doses, three times a day, and in two days it produced so much giddiness and sleepiness that he quit giving it. He had only used arsenic as an alterative tonic after the sugar had disappeared from the urine. With this treatment the patient should be

advised to take light exercise, always short of fatigue, and their surroundings should be good and well ventilated. Alkaline carbonated waters are often of great utility and gratefully received.

### *Treatment of Strictures of the Male Urethra.*

This was the title of a paper read by Dr. J. W. Handly, of Nashville.

He said strictures of large calibre, if they be recent, but poorly organized and of the linear variety, may be treated by dilatation, which must be continued for months. But should the stricture be densely fibrous, and not easily dilatable, the cutting operation becomes necessary, for which purpose he prefers Dr. Otis' improved dilating urethratome, with which the surgeon can accurately divide any stricture to any size desired.

Strictures of small calibre, situated in advance of the bulbo-membranous junction, unless seen very early and found to be unusually soft and dilatable, furnish a typical condition for internal urethrotomy, that in which it is attended with the least possible danger and greatest prospect for a permanent cure. Should the contractions be so great that the Otis urethratome can not be used, he had found Bank's whalebone dilators, which are made in four sizes, of great advantage in opening the canal so as to admit of the urethratome, and considered them very useful.

Strictures of small calibre posterior to the bulbo-membranous junction, require a very different course of treatment, since internal urethrotomy at this point is often attended with profuse hemorrhages, fever, rigors or other disturbances equally as disagreeable. Strictures of this variety, permeable only to filiform bougies, may be treated in one of the four following ways, to-wit:

1. After the filiform has been introduced it may be allowed to remain *in situ* for two or three days and another passed alongside of it to serve as a guide for the introduction of a tunneled sound, later to be followed by the ordinary soft or steel bougies. This is good and safe surgery in the absence of retention.

2. The surgeon may attempt to conduct a tunneled sound over it at once, to be followed by gradual dilatation.

3. He may conduct over it a grooved staff and then proceed to the performance of external urethrotomy. Or

4. He may use the staff as a guide for the Massionneuve urethratome and may immediately perform internal urethrotomy.



## OFFICERS FOR 1892.

The following officers were elected for the ensuing year:

President—Dr. J. W. Penn, Humboldt.

Vice President for Middle Tennessee—Dr. J. A. Wither-  
spoon, Columbia.

Vice President for East Tennessee—Dr. C. E. Ristine,  
Knoxville.

Vice President for West Tennessee—Dr. C. H. Lovelace,  
Dukedom.

Secretary—Dr. D. E. Nelson, Chattanooga.

Treasurer—Dr. J. P. C. Walker, Dyersburgh.

Place of meeting, Knoxville, second Tuesday in April,  
1892.

## ORLEANS PARISH MEDICAL SOCIETY.

The annual meeting was held Saturday, March 28, 1891. The following report was read by the president, Dr. Chas. Chassaingnac:

GENTLEMEN—The constitution of this society imposes upon the president among other tasks, the following: He shall "report at the close of his term of office what has been accomplished to promote the objects of this society, recommending such measures as he may deem necessary to promote these objects more effectively."

It becomes my duty then to call your attention to one of the most important occurrences in the recent history of this society, the amalgamation with the "Library Association," which was accomplished with the assistance of the officers of that association, already zealous members of this society. This move is to be considered all the more important because a short time before the "New Orleans Medical and Surgical Association" had disbanded and turned over its funds to the "Library Association" for the purchase of books; everything in the line of medical organization in this city then became concentrated in the "Orleans Parish Medical Society." It is obvious that a society must be strengthened by thus collecting to itself alone, instead of having scattered among two or three, all funds available for the purpose and the energy of all physicians taking an active interest in the welfare of their profession.

Another action taken by this society during the past year is worthy of special mention. Although the end in view was not attained, it was a move in the right direction, will teach its lesson, and no doubt result in good to the profession in the near future. This was the endorsement by this society of a

bill regulating the practice of medicine prepared by a committee of the "State Medical Society," which endorsement consisted not only of words, but of money spent to assist the State committee, and for the expenses of a committee from this society to go to Baton Rouge and aid in having the bill made a law. The efforts of the committee were only partially successful; the bill passed the House, was reported upon favorably by the Senate committee to which it had been referred, but was finally indefinitely postponed in the Senate, in part on account of opposition from some of the homœopaths, but also from the unexpected and uncalled for opposition at the last moment of a member of the State society who, I am glad to say, is not a member of this society. However, valuable information has been gained, whatever points in the bill which were at all weak have been discovered, and, guided by this past experience, it will be easier to achieve complete success another time.

The secretary's report will show you that as far as the routine work is concerned, we have done a little better than the preceding year, and that we have gained a good number of new members. The active interest of the majority of members, however, as evidenced by the average attendance at meetings, is not nearly what it ought to be. That the objects of the society are approved and that the trouble is not due to a faulty organization are proved by the fact that nearly one-half of the regular profession of the city are members and pay dues. The cause is the indifference of members individually, and that indifference is brought about in various ways. Many have not given the subject enough thought to realize that while performing a duty they could derive both pleasure and benefit by attending the meetings. Some fail in their attendance because their vanity makes them believe they can learn nothing at the meetings. They should remember that even a person knowing less than we do can throw out a valuable suggestion, or can call attention to a fact we have not had the occasion to observe; "on a souvent besoin d'un plus petit que soi." Besides, if there be some who know too much to learn here, let them come to give others the advantage of their views—impart some of their knowledge. There are others, again, who have attained a prominent position professionally and financially who are too utterly selfish to care whether there is a medical society or not, or how it fares, while many who, on the other hand, are beginners, or have not yet made money, fear to attend meetings because they might miss a call during their absence. Let the former have conscience enough to admit that because they have succeeded they owe something

to their profession and must try to attend; the latter will then be more readily attracted to the meetings and will soon realize that the possible loss of an occasional call is more than compensated by the benefit to be probably derived through their attendance.

The last class among the derelict are those who claim they are too busy. Men can never be so busy that they may not be able to devote a couple of hours every month or two to the cultivation of better relations between the members of their calling or the advancement of their profession; if there be any, they can do nothing better for their own sake than to arrange so as to have less to do; if some men can manage to come a whole year, even three or four years, without missing a meeting, surely nearly all can come a few times a year.

All honor to those who come with some regularity. The future of the society is in their hands; they must continue their good work; they must teach the strayers from the fold what there is of truth in all I have just said; they must get in new members—some will be of the right kinds. Only the first steps are difficult; we have made some in the direction of progress—a few more and the rest of the route onward will be easier.

The surest way of gaining members and making the organization powerful is to make membership in the society desirable. One of the features which already gives value to membership is our library. We have a good nucleus of books and we receive more than a dozen of the best journals of the world. This should be set forth in our attempts at getting recruits. By constantly enlarging our collection and increasing the advantages of our library, this department alone would soon cause membership in the society to be eagerly sought.

Let me thank you, gentlemen, for your courtesy to me while I have occupied the chair, and the attention you have given to the little I have had to say during the year.

The secretary and treasurer, Dr. M. J. Magruder, read the following report:

|                                         |    |
|-----------------------------------------|----|
| Number members last annual meeting..... | 87 |
| Number elected this year.....           | 14 |
| Number died during year.....            | 1  |
| Number resigned.....                    | 1  |

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Leaving a total membership of..... 99

Of which ninety-seven are active and two are corresponding members.

This shows an increase of twelve.

All of the twelve regular meetings have been held and one extra meeting.



## FINANCES.

|                             |          |
|-----------------------------|----------|
| Cash on hand last year..... | \$272.90 |
| Receipts during year.....   | 385.00   |
| Disbursements.....          | 295.90   |
| Balance on hand to-day..... | 362.00   |
| Showing an increase of..... | 89.10    |

The following officers were elected for the ensuing year:

President, Chas. Chassaignac, M. D.; Vice Presidents, A. McShane, M. D., F. Formento, M. D., S. Logan, M. D.; Secretary and Treasurer, M. J. Magruder, M. D.; Corresponding Secretary, H. W. Blanc, M. D.

## THE IDENTITY OF DIPHTHERIA AND MEMBRANOUS CROUP.

DISCUSSED BY THE LOUISIANA STATE BOARD OF HEALTH.

At a regular meeting of the Louisiana State Board of Health, held March 12, 1891, a committee of three, consisting of Drs. Formento and Bezou and Mr. T. A. Clayton, were appointed to report upon the advisability of subjecting cases of membranous croup to the same sanitary measures as are practised against cases of diphtheria. Accordingly, at the meeting of April 9 last, Dr. Formento, the chairman of the committee, read the following interesting report, which elicited considerable discussion:

GENTLEMEN—At our last meeting, the following resolution was presented by one of your committee:

WHEREAS, Cases of membranous croup are considered by many physicians as cases of true diphtheria; *Resolved*, That hereafter all cases of so-called membranous croup be reported to the Board of Health, and all precautions recommended in cases of diphtheria be adopted against said cases of membranous croup.

This motion, after some discussion, was referred to your Committee on Contagious and Infectious Diseases, which now has the honor to report as follows:

We have consulted numerous authorities and writers on this important subject, of both Europe and America, and the following is the result of our researches:

In France, where diphtheria has perhaps been better studied than in any other country, membranous croup and diphtheria are regarded, almost universally, as the same and identical affection. It was, as you know, in 1826 that the celebrated Bretonneau first grouped under one name those affections of the throat and windpipe in which there is formation of a

false skin or membrane. In order to designate them, he coined the word *diphtherite* from the Greek *διφθέρη*, which signifies skin or parchment. The name diphtherite was subsequently modified to diphtheria by Trousseau, the most distinguished of Bretonneau's pupils and admirers. Bretonneau was the first to demonstrate the specific infectious nature of diphtheria. He did for diphtheria what Louis and others had done in regard to typhoid fever. Louis united in one group diseases which had previously been considered as of a different character, and were known under numerous and varied denominations. Thanks to his anatomical researches, the putrid, malignant, mucous, adynamic and ataxic fevers of olden times were reduced to a *unity*, which he named *typhoid fever*. He demonstrated that those fevers were only forms of one malady, having constant characteristic morbid lesions in the intestines. Louis' views and nomenclatures have ever since been adopted all over the world. Such has been the case with Bretonneau's discovery. The name given by him to the disease is now used in every country, and his views and opinions in regard to it have been adopted almost universally, as will be seen hereafter.

After the classical memoirs of Bretonneau came the writings of Trousseau, Gaussart, Brichteac, Bauchat, Blache, and others, which threw the greatest light on the nature, symptoms and treatment of diphtheria. All these authors believe in the identity of croup and diphtheria.

In Italy, the almost universal opinion of the profession is that the two affections are one and identical, only varying in its localization—at one time generally affecting the throat and extending or not to the larynx and trachea; at others affecting primarily the latter organ, or the nose or the denuded skin.

Coming to English, American and German authors, we see that Sir Morrell Mackenzie, of world-wide reputation, considers croup and diphtheria identical. He says: "I entertain the view that croup is only a form of diphtheria in which the local expression is found in the larynx and trachea, as it often is in the nares (with or without its occurrence in other parts)."

Sir William Jenner, the great clinical teacher (1875), and also the renowned Traube, of Germany, consider the two diseases as one and identical.

J. Lewis Smith, M. D. (Sajou's Annual, 1889, Vol. I), speaking of diphtheria, says that croup is but one form of the same disease.

W. P. Marthrop, M. D. (Keating's Cyclopædia of Diseases of Children, 1890), says: "It seems advisable, therefore,

to consider all cases of pseudo-membranous laryngitis, not of traumatic origin, as local manifestations of diphtheria.

Loomis and Lennox Brown are among the few that consider them different diseases. Drs. Hillier, Semple and Johnson, of England, all advocate with great earnestness and ability the doctrine of identity of the two diseases.

We now come to the opinion and practice of Boards of Health in our own country. Their official action in regard to diphtheria is of particular interest to us, sanitarians, whose duty, like theirs, is the protection of the public health, of more practical interest even than opinions of individuals, however eminent they may be.

We read in the report of the State Board of Health of Maine for 1890: "Membranous croup is now generally regarded as diphtheria of the air passages, and the same precautions are applicable to it as in ordinary diphtheria."

In date of March 21, 1891, Dr. Benjamin Lee, secretary State Board of Health of Pennsylvania, writes as follows to Dr. Formento:

"DEAR DOCTOR—Replying to your favor of the 18th inst., I have to say, first, that our Board, and especially myself individually, believe in the identity of membranous croup and diphtheritic croup. Second, that I believe that membranous croup, when not caused by some powerful chemical irritant, is generally due to diphtheritic poison. Third, our Board advises all local Boards to place membranous croup on its list of infectious diseases and to require physicians to report it. I am glad to see that your State Board of Health is alive to the importance of this question, and trust that its action will be in the affirmative."

In the biennial report of the State Board of Health of California for the years 1889 and 1890, we find the following interesting statement: "During the fiscal year 1889-90, the deaths from diphtheria numbered 225, which added to 130 from membranous croup makes the sum total from these *twin* diseases 355. Croup caused the deaths of 135 children, the majority being under ten years of age. As a rule whenever a case of croup was reported, diphtheria was found in its immediate neighborhood. The fact has been so often observed that the State Boards of Health of Michigan, Iowa, and some others, have adopted resolutions to the effect that for sanitary purposes, membranous croup shall be considered identical with diphtheria, and that it be included in the list of contagious diseases. Nearly all German authorities take the view of the unity of croup and diphtheria. We think it unquestionable, however, that there are cases of membranous croup which



have no etiological relationship to diphtheria: but as we have no trustworthy means of diagnosing these cases from those of diphtheria, the safest course for us to pursue is to consider them diphtheritic and surround them with all the precautions we would use if we knew them to be of diphtheritic origin."

No words could better express the views of your committee on this important question. The motion "to report all cases of croup" was inspired precisely by the knowledge of the difficulties of diagnosis, and the consideration of the facts above stated. We could here submit our case, without further argument, to use the expression of our legal brethren. We think we have fully demonstrated that our belief in the identity of membranous croup and diphtheria is shared by the majority of medical authorities and practitioners, or, to use the modest and milder language of the preamble of the resolution, that cases of membranous croup are considered by many physicians as cases of true diphtheria. This being admitted, the most elementary prudence and regard for the welfare of the public health make it a duty to adopt the resolution.

As a report on a purely medical topic will not be complete without some medical argument, in addition to the authorities above cited, your committee will be pardoned for saying that the supposed pathological and alleged clinical differences on which rest the duality theory are not founded on facts and can be easily refuted. There is no apparent naked eye differentiation possible between the croupous and diphtheritic membranes—none, at least, that can not be satisfactorily explained by the difference in the structure of the parts on which they are thrown out. Nor have microscopical observers been able to differentiate the two diseases. The bacillus diphthericus of Loeffler, the only recognized micro-organism of diphtheria, has been found present in the sputa or membranes of membranous croup. As to the clinical differences said to exist between the two diseases, they admit of ready explanation. The difference in the anatomy of the parts affected and of the lymphatic glands in direct connection with them account for some of the secondary symptoms and for the more or less liability to general infection. In cases, however, where primary septic poisoning exists, the constitutional symptoms are as marked in one disease as in the other. Difference of localization, moreover, in a constitutional disease does not constitute a specific difference. To use the words of Sir Morrell Mackenzie, cancer is always cancer whether the pharynx alone or the larynx alone is affected, or whether both are attacked at the same time or consecutively, and rheumatism

is still rheumatism whether it affects the heart or the ankle. Such is the case with diphtheria. We believe that pathologically, clinically and microscopically diphtheria and croup are, in the majority of cases, one identical affection, with different localizations, but generally affecting at the same time, or consecutively, both pharynx and larynx.

To suppose that there are two kinds of pellicular inflammation of the larynx—one in which the cause is the diphtheritic poison and the other in which the cause is some undiscovered influence—is totally opposed to all probabilities. (Mackenzie.)

In conclusion, we will mention two cases that came recently under our personal observation.

One of us was called, a few weeks ago, to attend a child in a private family unknown to him, and to whom he was called for the first time. The child was found to be in the last stage of membranous croup. False membranes, presenting the form and appearance of round macaroni, had been expelled in violent attacks of coughing. There was not the slightest sign of membranes in the throat or mouth. The child died, as was expected, the day following our first visit, and a few days after, we discovered that another child, brother of our patient, had died in the same house, attended by another physician, of membranous sore throat, or diphtheria.

In the other case, one of us was called in consultation for a young child, also in the last stage of croup, following an attack of measles. Tracheotomy was performed. During and after the operation, large shreds of false membranes were expelled, and the child recovered. A few days after, a child of the same family was attacked with a violent diphtheritic angina, the larynx was not involved, and that child also recovered. We then learned for the first time that a few days before the first child attended by us had fallen sick, another child had died in that family of angine couenneuse, terminating in croup.

These facts, and others we could mention, prove conclusively that membranous sore throat or pharyngitis, and membranous laryngitis or croup are, in the great majority of cases, but forms or localizations of the same disease, viz: diphtheria, one form often giving rise to the other, and that we sanitarians should consider them practically as one disease, and surround them with the same sanitary precautions.

[Signed]

FELIX FORMENTO, M. D.

HENRY BEZOU, M. D.

When Dr. Formento had concluded, Mr. Clayton submitted a minority report. He apologized for expressing views opposite to those of the medical men of the committee, urging as his reason that many of the most prominent physicians did

not believe that membranous croup was infectious or identical with diphtheria, and that they would refuse to report such cases among infectious diseases unless the authority of the courts was invoked. They would be willing, however, to take all precautions necessary to prevent the possible spread of the disease, and the minority report recommended that the action urged by the majority report be delayed, pending a more thorough investigation of the subject.

Both reports were received by the board.

Mr. Clayton then proposed in lieu of Dr. Formento's motion that the board simply request physicians to report cases of croup so that a record might be kept at the office and the authorities enabled, by reference to this, to locate all of these cases and determine whether there was any truth in the idea that cases of croup either precede or follow diphtheria in a given locality. Col. J. D. Hill was opposed to both resolutions. He said that Dr. Formento had shown that though many medical men believed in the identity of these diseases, still there were others who did not, and as the medical profession was not at all unanimous the board might do a great wrong to those in whose houses croup existed by demanding admission and subjecting them to a great annoyance.

Col. Hill viewed the question from the standpoint of a lawyer, and to him it was a question of personal right. If there were a case of croup in his house and his family physician, on whose opinion he relied entirely, did not consider the disease contagious, he would feel that his rights were being trodden upon. As long, then, as physicians differ, it had better be left to individual members of the profession as to whether there should be disinfection after cases of croup.

Col. Hill moved that both resolutions be tabled, and this was seconded by Dr. Kells. A motion to table can not be discussed, but as others wished to express their views, it was tacitly understood that they could do so.

Dr. Bezon said that in concurring with Dr. Formento he did so, not as a simple matter of opinion, but from profound conviction. One of the cases referred to in the report was one that he had treated, and he remembered, over a long period of years, having seen other cases of diphtheria follow so-called membranous croup.

Dr. Formento advocated with considerable fervor the resolution he had offered, stating that although doctors did differ the authorities he had cited were the men who had studied this question most deeply—the men who led and gave public opinion in the medical world. It was a question for this board to decide. They were the custodians of the people's health, the sanitary



authorities, and if they directed physicians to report cases of membranous croup, they would do so. It was well known that measles produced more deaths in New Orleans than scarlatina, and if this board directed physicians to report cases of measles this disease would be reported.

The President (Dr. Olliphant) was asked for his opinion.

Dr. Olliphant stated that he believed the two diseases to be quite different. This had always been his opinion, and his views were the same as those of a well-known New York authority, Dr. Loomis. (Dr. Formento here stated that he had cited the views of Dr. Loomis in his report.)

Dr. Olliphant thought that the diseases differed in location, clinical history and mode of death. Croup was a local disease, while diphtheria was a blood disease. He desired to be placed on record as believing in the duality of the diseases.

Mr. Holloway called for the motion to table both resolutions. This was put by the president, and carried by the following vote: Yeas—Hill, King, Holloway, Kells. Nays—Formento, Bezon, Clayton. Col. Hill then moved that the question be referred to and decided by the board of experts, but the motion was lost.

Cases of membranous croup will be neither reported nor disinfected.

## GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

### FEBRUARY MEETING.

The president, Dr. Henry M. Wilson, in the chair.

Dr. Neale reported the following case of

#### *Occlusion of the os uteri during four days' parturition:*

Mrs. K. W., age 26 years; primipara. Past history, unimportant. Last menstruation, early part of April, 1890; pregnancy normal up to November 16, 1890, when she slipped and fell violently on her right side on the sidewalk. There was no vaginal discharge at the time and no discomfort, except from the jar, bruising, etc., and the patient was up and about all the time. No movements of the child were felt after the fall.

About Christmas, 1890, an offensive yellowish vaginal uterine discharge occurred and continued for one week.

On the night of January 12, 1891, her first labor pains began and were so severe as to require morphine given by her attendant. There was no "show" or discharge of any kind. The pains increased and the patient was suffering severely

when I saw her for the first time, Friday evening, January 16, 1891. She was a large, well-built and well-nourished woman.

Could not distinctly map out the child by abdominal palpation. By auscultation, gurgling over the entire uterine tumor, and not a trace of foetal heart sounds could be heard.

By vaginal examination, very short and small vagina, no cervix and no os. A continuous layer of mucous membrane, flush with the vaginal walls, closed over the entire vault of the vagina, and a little dimple in its center was the only indication of where the os ought to be.

Patient chloroformed, placed in position, hand passed into vagina, finger pressed firmly against the dimple, when it suddenly yielded or burst open like a membranous web, permitting a gush of *not* foul smelling bloody water to escape, and at once the rapidly enlarging outlines of the os could be felt, then about as wide as a silver half dollar piece. The soft bagging scalp and loose cranial bones came down upon the enlarging os, and as the expulsive efforts were almost *nil* I grasped the head with a Simpson's cranioclast, which tore away, and then the blades of a Tarnier basiotribe were adjusted over the head and neck and a thoroughly macerated but not decomposed or foul small child was easily extracted, perineum intact, os fissured slightly. Small placenta expelled within six minutes. Considerable post-partum hemorrhage, uterus acting freely. Os remained open about size of silver half dollar piece, thick edges, uterus rather small, but not firmly retracted. Two quarts of a hot intra uterine 1-4000 bichloride solution were injected. Patient rallied well, and, debarring an occasional slight rise of pulse and temperature and faintly foetid lochia which readily yielded to the antiseptic douche, the puerperium was uneventful and recovery complete. This case was a novel one to me. I am quite sure the membrane I felt was mucous and not the amniotic sac, nor do I think the case should be classed among those of cervical occlusion or stenosis from endotrachelitis.

Dr. J. Whitridge Williams read a paper on

*The induction of premature labor in contracted pelves.*

He pointed out that the comparative neglect of the operation in this country was due to two causes, the absence of large lying-in institutions and the consequent lack of large amounts of clinical material, and almost total neglect of pelvic measurement.

By the term premature induction of labor one understands the artificial interruption of pregnancy at such a period that a

viable child may be born; that is any period from the twenty-eighth or thirtieth week to the end of pregnancy.

Dr. W. then went into the history of the operation, and showed that it was first rationally employed for this indication in England, as the result of a conference of the eminent physicians of London in the year 1756.

Within fifty years it was quite generally employed on the continent, and soon enjoyed a popularity which caused it to be resorted to on the most trifling pretexts, and which in 1869 called forth Spiegelberg's forcible denunciation of the operation by which he showed that the mortality, both of the mothers and children, was nearly three times greater after the operation than if the woman went on to term. This was soon followed by articles by Litzmann and Dohrn, who showed that Spiegelberg had painted the picture in colors far too dark.

Litzmann showed that in moderate degrees of contraction, 8.25 to 7.5 cm. ( $3\frac{1}{4}$  to 3 in.) the operation was indicated in the interests of the mother, as shown by a mortality of 7.4 per cent. after the operation compared with one of 18.7 per cent. when the woman was allowed to go on to term.

Dohrn stated that the proper method of appreciating what the operation accomplished was not to compare so many cases of induced labor with so many cases of labor at term, but to compare the results of premature and spontaneous labors in the same woman; by this method he found that twice as many children were saved by inducing labor as by allowing the woman to go on to term.

Consequently they proved that the operation was indicated in properly selected cases both in the interests of the mother and child.

The introduction of antiseptic methods into midwifery almost completely robbed the operation of danger for the mother, as will be readily seen from the following statistics. Thus Haidlen reports forty-four cases from the Stuttgart clinic, with no maternal deaths and 72 per cent. of the children saved.

In 1889 Korn stated that Leopold lost one woman in forty-five cases and saved 66 per cent. of the children, and last July Ahlfeld stated that he had induced labor 118 times with the loss of only one mother, and had saved 62 per cent. of the children. At the Berlin congress Fehling stated that in sixty cases he had saved all the mothers and 80 per cent. of the children.

From the above sketch we will readily see that the maternal mortality in properly selected cases is very slight: 401 cases collected by Korn showing a maternal mortality of only 2.9 per cent., or just a trifle more than normal labor in a nor-



mal pelvis, while the foetal mortality ranges from 20 to 70 per cent., the average being about  $33\frac{1}{4}$  per cent. So in this operation we have a means of saving about two-thirds of the children without any risk to the mother. Or reckoning by Dohrn's methods we save at least twice as many children as if we allowed the woman to go on to term, and then resorted to some conservative operation.

These are the prospects of the operation, but unfortunately the degree of contraction within which the operation is justifiable is very limited, and one can only think of it in moderate degrees of contraction—according to Litzmann, in flattened pelves with a conjugata vera of 7.5 to 8.25 cm. (3 to 3.25 in.); and to Schroeder, 6.5 to 9.5 cm. (2.5 to 3.75 in.)

As pelves with a conjugata vera above  $8\frac{1}{2}$  cm. ( $3\frac{3}{8}$  in.) offer a reasonable chance to both child and mother at term, and those below 7 cm. ( $2\frac{3}{4}$  in.) offer no chance to the child, I think that the operation should be restricted to these limits; that is between 7 to  $8\frac{1}{2}$  cm. ( $2\frac{3}{4}$  to  $3\frac{3}{8}$  in.) in simple flattened pelves.

In the *justo minor* pelvis a conjugata of  $9\frac{1}{2}$  cm. ( $3\frac{3}{4}$  in.) or less will usually be an indication for the operation.

In the rare forms of obliquely narrowed pelves, whatever its cause, we must be guided almost entirely by the history of previous labors.

We thus have the operation restricted to a very small range,  $1\frac{1}{2}$  cm. ( $\frac{5}{8}$  in.); which should only be exceeded when the previous history tells us that the previous labors have all ended disastrously. We should not think of inducing labor in a flattened pelvis with a conjugata below 7 cms. ( $2\frac{3}{4}$  in.); for in that case the prospects for the child are almost *nil*, and the dangers to the mother greatly increased. Here we have come to the relative indication for caesarean section, when it is best to allow the woman to go on to term, and attempt to save both mother and child by that operation.

With these contracted indications, we readily see that an accurate idea as to the exact size and form of the pelvis is an absolute prerequisite for the performance of the operation; and the only means by which we can accurately obtain the information is by carefully measuring the pelvis.

We should not content ourselves with simply measuring the conjugata vera, but should also take the external measurement, and thereby attempt to determine with what form of pelvis we have to deal. After doing that, we must carefully examine the interior of the pelvis to determine its height; to see if it is generally contracted, and if contracted, if the contraction increases as we approach the outlet. We must look for the

exostoses of the pelvic bones and carefully examine the promontory to see if it is double or not.

If we think the pelvis contracted laterally we should measure the distance between the tubera ischiorum on each side, as Breisky recommended. We should also attempt to estimate the transverse diameter of the pelvis, which is most difficult to do, and the most that can be expected is to examine alternately with each hand, and try to stroke the linea innominata and so relatively to get some idea as to the transverse diameter.

Having decided that an operation is necessary, the next question is, when shall it be done? Of course the younger the fœtus the smaller will be its size, and consequently the easier its delivery. But, unfortunately, the smaller the fœtus, the less chance will it have of living, even if it survive the operation. Generally speaking, we say a child is viable after the twenty-eighth week, but its chances of living are almost *nil*. Indeed, children thirty to thirty-two weeks' old have next to no chances of living. The later the operation the more chance has the fœtus of living after it, but, unfortunately, its size and consequently the difficulty of its delivery increase with its age. If possible, the operation should be done about the thirty-fourth to thirty-sixth week, our object being to operate at the latest possible period consistent with safe delivery.

To fulfil this object we must attempt to gain an accurate knowledge as to the size of the child's head. Unfortunately we are unable to determine its size with mathematical precision or even with the relative precision of pelvimetry; so we are obliged to take advantage of every possible hint on the subject. Some of the following points may be of assistance in different cases: We must consider the mother's account as to the duration of the pregnancy. Notice the size of the parents—large parents usually having large children. Inquire about the previous labors, particularly as to the size of the head. Endeavor to estimate the size of the head by abdominal and combined abdominal and vaginal palpation; and note the consistence and amount of resistance to compression that the bones of the head offer. Try to measure the head with the pelvimeter through the abdominal walls, and deduct the estimated thickness of the abdominal walls from the result. Notice the size of the large anterior fontanelle, average width two cms.: the width of the sutures; and the distance from the anterior to the posterior fontanelle; for as they are larger or smaller, it indicates a larger or smaller head. Measure the length of the fœtus, as it lies in utero, from breech to vertex, double the measurement and it gives, according to Ahlfeld, the length of the fœtus. If a foot is prolapsed, measure it, for Goenver stated that there is

a difference of nearly one centimeter between the length of the foot of a child at term and one at thirty to thirty-four weeks.

One of the most important methods is that of Mueller, who attempts to force the head down into the pelvis by pressure from above. As long as he is able to force the head down he knows that labor will readily take place, but when he can no longer force the head down and when it bulges out over the symphysis, then he considers that the time for operation has arrived. As the great danger to the mother is from sepsis, one can not be too careful in one's efforts to guard against it, and consequently one should be most particular in one's preparation for the operation.

For several days previous to operating, the woman should have a warm bath daily, and several times a day be douched with warm water, 95 to 98 deg. F., containing salt or borax, by which the cervix is softened and dilated. Just before operating, the genitals should be most carefully washed with hot water and soap, followed by a 1-1000 bichloride solution; the vagina should also be most carefully cleansed.

The hands of the operator should be washed for at least ten minutes in hot water and the nail brush vigorously used, after which they should be placed for several minutes in a 1-5000 bichloride solution.

All instruments should be sterilized by steam, or placed in a 5 per cent. solution of carbolic acid for at least thirty minutes.

The most generally approved method is that of Krause or the introduction of a disinfected flexible bougie between the membranes and the uterine wall. If properly conducted it is almost entirely devoid of danger for the mother, and will bring about the birth of the child in a period varying from 8 to 214 hours, averaging about 80 hours or about three days. To insert the bougie, the woman is placed on her back or side as may be most convenient, and the cervix brought down by a pair of bullet forceps and the cervical canal carefully cleansed with bichloride on a pledget of cotton; the bougie is then carefully inserted so that its lower end is within the vagina, care being taken not to wound the membrane or the placenta. Then the vagina is packed with iodoform gauze. If at the end of twenty-four hours no labor pains have been produced, the bougie should be removed and another introduced at another point under the same precautions as the first.

If this method fail we may resort to Kiwisch's method of allowing a current of hot water, 100 to 110 F., to flow through the vagina several times a day for a period of from five to fifteen minutes. Or we may puncture the membranes. As acces



sory to these, we may loosen the membranes about the lower pole; dampen the vagina with iodoform gauze or employ Barne's bags.

If the pains are weak, Fehling recommends version by Hick's method and bringing down one leg, whereby increased contraction is produced and one is afforded a ready means of ending the labor if one deems it expedient in the interests of the mother or child.

Dr. Neale: I regard the chief point in this very able paper to be the endeavor to definitely fix the limits for the induction of premature labor in contracted pelves, not as opposed to cæsarean section but as applicable to a distinct and separate class of cases. This endeavor I strongly advocate, but at the same time must confess that I do not believe the plan is always practicable at the bedside. There are so many factors entering into the determination of this question, as I stated in my paper, that I can now only repeat what I there quoted, viz.: "A given pelvic measurement is useful as an indication of what has been the experience of others under similar circumstances, but is not a final ground for decision."

After the evidence adduced, which doubtless represents the opinion of the best medical authorities, I am sure I only voice the concurrence of this society in accepting the limits for this operation, as stated by Dr. Williams.

This is practically in accordance with the teachings of Lusk—probably our strongest American authority—who places the range for the induction of premature labor in contracted pelves at a conjugata vera of from  $2\frac{3}{4}$  inches (7 cm.) to  $3\frac{1}{2}$  inches (8.75 cm.).

As stated in the paper, I believe the most reliable statistics of this operation are those of Dohrn, who compares the results of induction of premature labor with those of labor of term in the same case, showing a very decided advantage in premature labor. It must be remembered, however, as Litzmann has clearly shown, that children born alive by this operation are far more likely to die early than matured children. The risk to the child does not cease with the delivery.

I can not recall any reference in the paper to pelves contracted from hip joint disease, and yet I have met with two obstetrical cases of this character during the past two year in this city; both were in private practice, and both were *prisma-paræ*.

The first case I saw in consultation during a very severe labor at term, and delivered her of a still born child by a difficult high (Tarnier) forceps operation.

Premature labor was induced on the second case at the

eighth month. In this case the bougie was retained under antiseptic precautions (2 per cent. creoline cervical and vaginal douche and iodoform gauze over os) between the membranes and uterine walls for forty-eight hours without effect. It was then withdrawn, the douche again administered, and bougie re-introduced in a different position and retained for twenty-four hours again without effect. The sac was then punctured high up by the probe, and labor began in about fifteen hours. Thus we see the method of Krause, although the best, may fail, where puncture of the sac will not.

As this lady was poisoned to death by an unclean servant who dressed and picked carious bone from her foot and then attended my patient, and handled all her linen, napkins, etc., without my knowledge, it shows the importance of extending our antiseptic precautions to everything coming in personal contact with the case. As regards the method of delivery, the experiments of Budin and others speak strongly in favor of version and extraction as opposed to forceps.

Dr. Kelly: The subject is too large to be discussed formally; I will merely refer to one or two points of interest. A serious complaint is to be entered against the records of foreigners in regard to the statistics of infant mortality after premature labor. Many observers only state whether the child was born living or dead; some few state whether or not it was living when discharged from the hospital. What we want to know for practical purposes is whether the children live any time after they get home. My own experience is but few live. If they are sent out simply to die soon after at home, the induction of premature labor among the poorer classes simply becomes a species of uterine gymnastics.

A method of my own which I have found most successful in inducing premature labor, is taking a flexible whalebone bougie, introducing it between the membranes and the uterine wall, high up into the uterus, and sweeping it gently around for one or two inches in either direction. This has not failed me in any instance in bringing on labor.

WM. S. GARDNER, M. D.,  
*Secretary.*

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CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.—The meetings of the Congress of American Physicians and Surgeons will be held in Washington, from 3 to 6 P. M., September 22, 23, 24 and 25, 1891. William Pepper, Chairman of the Executive Committee.

## EDITORIAL ARTICLES.

## THE STATE MEDICAL SOCIETY.

On the 13th of May, 1891, the State Medical Society of Louisiana will hold its next annual meeting. The president, acting upon the advice of a number of the prominent working members of the society, changed the place of meeting to New Orleans. This step, we feel sure, will meet with the hearty approval of the entire society.

We have not at hand the data for forming an opinion as to the probable success of the coming meeting, since the chairmen of the various committees are not yet ready to report, but we can assure visiting members of a most cordial reception at the hands of their brethren in New Orleans, who shall see to it that nothing shall be left undone to make the gathering a most pleasurable one.

Two years have elapsed since the physicians have come together to exchange views on scientific matters. In that time many important events have taken place, and the whole medical world has been profoundly agitated by a question which interests the whole human race, namely, the cure of tuberculosis. At the annual gathering of medical men they have an opportunity to set forth the fruits of a year's patient toil, and hear the views of men who are as deeply interested in the subjects treated of, and are capable of discussing them ably and intelligently. In the two years in which our society has slept there have been many opportunities for study and investigation. Have those opportunities been used? Our next meeting will show how much Louisiana physicians are able to contribute to medical knowledge and we confidently look forward to an abundant and gratifying harvest of good works.

## THE BACTERIOLOGICAL WORLD.

A notable addition to American medical periodicals is the *Bacteriological World*, published at Columbus, Missouri, and ably edited by Dr. Paul Paquin, Bacteriologist of the State University of Missouri. The first number appeared in January,



1891, and presented its readers with valuable articles pertaining to bacteriology. Subsequent numbers have maintained the high standard of merit established by the initial number. The February number contained an illustrated article on malaria, which is of special interest to physicians in the southwest, and which we hope to reproduce.

Among our valued exchanges we prize very highly the *Centralblatt für Bakteriologie und Parasitenkunde*, published in Jena in Germany. This placed German medical journalism ahead of American, but we are to see that a worthy effort has been made to fill up the gap that existed in our current scientific literature. Bacteriology has assumed such vast importance in modern medicine that not to be conversant with the progress continually being made in this young science is to argue one's self as out of the ranks of progressive men. It is with great pleasure that we note the advent of an American journal on bacteriology, since it is the expression of a desire on the part of American physicians to know what is good and what is the latest.

## ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

### SURGERY.

#### THE CONTAGIOUSNESS OF CHRONIC URETHRAL DISCHARGES.

This is a question which the physician is frequently asked, and which many practitioners are not always able to intelligently answer. Indeed, there seems to be much variety of opinion among specialists in venereal diseases as to when the contagious stage of a gonorrhœal urethritis ceases.

Dr. Geo. E. Brewer, in a paper read before the Section on Genito-Urinary Surgery of the New York Academy of Medicine, February 12, 1891, presented a review of the opinions that have been maintained by eminent authorities; the existing state of knowledge on this subject; and the importance of determining the contagiousness of urethral secretions of patients contemplating marriage. He believes that the failure to recognize contagiousness in such cases results frequently in communicating gonorrhœa and attendant complications to the wife.

As early as 1785, Kühn called attention to the fact that the discharges resulting from a gonorrhœa remained contagious so long as they contained pus. The opposite opinion was held by Hunter, who denied the possibility of contagion from the gleet discharges of a chronic urethritis. This view was also shared by Bell and Ricord. In a paper entitled "Gonorrhœa a Non-specific Disease," published in the New York Medical Independent in 1864, A. K. Gardiner strenuously denies the contagious element in any, save the discharges from the most acute stage of the disease; and says regarding gleet that it is "allowably benign and innocuous."

Noeggerath, on the other hand, in a paper published in 1872, concludes that a man who has once been the subject of a gonorrhœal urethritis, *never* fully recovers, that the disease invariably lingers in the glands and ducts emptying into the canal, and may at any time furnish a secretion which may infect those with whom he has sexual relations. He also states that nine-tenths of all women married to men who have had gonorrhœa sooner or later become the subject of incurable and painful inflammatory disease of the uterus, tubes, or ovaries: that this infection may take place rapidly, and manifest itself as an acute affection, or by means of a slow and unrecognized process to which he gives the name of "latent gonorrhœa." In a subsequent paper, read before the American Gynæcological Association in 1876, the author reiterates these opinions, and adds that 99 per cent. of all cases of sterility can be directly traced to gonorrhœa.

Since the discovery by Neisser, in 1878, of the gonococcus, and the establishment of its relationship to this disease, but one opinion can logically be held by those who accept his theory of gonorrhœal inflammations, and that is, that all secretions containing this micro-organism are capable of transmitting the disease under favorable conditions. In his work\* under this subject, Ernest Finger emphasizes this point, and states regarding marriage, that it should be absolutely prohibited in all cases where the existence of a chronic urethritis is evidenced by the presence of the "morning drop" in the urine, until the following facts have been established:

1. That after from two to four weeks of daily observation, the secretions from the urethra are found to be *free from pus and made up wholly of epithelial cells*; ~

2. That no gonococci can be detected by the microscope, even after a purulent discharge has been established by the employment of irritating injections of corrosive sublimate or nitrate of silver, and

3. That neither prostatitis nor stricture exists.—*Medical Age*.

A CASE OF INTRINSIC CANCER OF THE LARYNX TREATED BY  
THYROTOMY.

By J. DUNDAS GRANT, M. A., M. D., F. R. C. S. England, Surgeon to the Central London  
Throat and Ear Hospital.

G. B. L., aged 50, was admitted under my care on August 23, 1890, complaining of loss of voice. He is a tall, thin man, somewhat pale and anxious looking, but on the whole fairly well nourished. He had had no previous disease of any seriousness, but at the age of 18 began to suffer from palmar eczema, which lasted for five years. His occupation, that of an undertaker, had led to considerable exposure in all kinds of weather, resulting in many slight catarrhal attacks. In youth he was a tobacconist's assistant, but he does not smoke. He has always been very abstemious in regard to alcohol. There was no evidence of gout, rheumatism, or specific disease. His family history is good: his father, aged 74, being still alive and healthy, his mother having died of paralysis at the age of 68, his brothers and sisters being all healthy.

His present illness commenced at Christmas, 1889, with a slight cold. This was followed by hoarseness, which gradually increased till his voice was completely lost, about six weeks before admission. There has been no cough or sweating, but he has lost fourteen pounds in weight since April, when he weighed eleven stone. He has not experienced any difficulty in breathing nor swallowing, neither has there been any pain until within the last few weeks, during which he has noticed a "shooting" pain running up to the left ear,

On admission his voice was a mere whisper; he had no cough, and his respiration and deglutition were normal. His weight was ten stone. On palpation of the larynx there was just sufficient fullness of the left ala of the thyroid cartilage to enable one to suspect that there was disease of the left half rather than of the right half of the larynx.

On laryngoscopic examination, the whole of the left vocal cord was seen to be replaced by a nodular mass of a pale coral pink color. This extended also to the ventricular band, which was much swollen and congested. The mass projected beyond the middle line, and was quite immobile during pronation and inspiration. Apparently the disease extended some distance below the glottis. The right cord was somewhat congested, but moved well, and the ventricular band was thickened and congested, apparently in continuation with the disease on the opposite side. There was a very slight sensation of fullness in the region of the glands over the carotid artery at the level of the thyroid cartilage on the left side.



On August 25 I removed, with forceps, a small portion of the growth, about the size of a split pea; this was frozen and cut six hours afterward, by Mr. W. Wingrave, and was found to consist of well marked "cell nest" formation of stratified epithelioma, confirming the diagnosis first made by Dr. Gordon Holmes, who had previously seen the case.

*Operation.*—On August 27, at 8 A. M., chloroform being administered by Mr. Wingrave, I performed tracheotomy through the two upper rings of the trachea. This was accomplished, with Dr. Orwin's assistance, almost without hemorrhage, after the principle—so prominently laid down by Mr. R. W. Parker—of lifting up the tissues by means of two pairs of dissecting forceps used at the corresponding position on the two sides of the middle line. Hahn's "tampon cannula" was then inserted, and left in position for twenty minutes to allow for its expansion. This, however, took place only imperfectly, as the sponge had been prepared too long in advance. The patient was noticed to breathe to some extent through the nose during the operation, but by far the greater volume of air passed by the tube. A considerable quantity of blood was inhaled into the air tubes. I then proceeded to perform thyrotomy with the aid of Mr. Lennox Browne and other colleagues. The thyroid cartilage was exposed by means of an incision continuous with the tracheal wound. The soft tissues above the notch having been redressed, the angle was divided with pliers, the *alæ* separated, and a complete view of the interior of the larynx was obtained, showing that the growth was (as suspected) more extensive than was indicated by the laryngoscope. It occupied the greater part of the left ventricular band and vocal cord, extending below the latter. There was also much thickening of the right band and cord, highly suggestive of extension to that side, so that it was deemed expedient to remove the whole of the interior of the larynx, as recommended by Mr. Bultin. This was done by means of a raspatory and blunt-pointed scissors, care being taken to preserve intact the laryngo-pharyngeal orifice. The crico-thyroid artery was divided, but there was no other hemorrhage of much importance. The cartilages were scraped quite bare, the whole interior of the larynx was thoroughly swabbed with a strong solution of chloride of zinc, and then insufflated with iodoform. After the *alæ* were wired together, a drainage tube was placed so that it projected through the upper and lower extremities of the incision, and the wound was closed by four sutures. The surface of the wound was dusted with iodoform, and blue sal alembroth wool dressing was applied. The patient was under chloroform nearly two hours, and bore it

very well, but toward the end he appeared somewhat collapsed. However, he speedily recovered after the hypodermic injection of ether. He was then put to bed, a restorative dose of brandy and beef tea was administered *per rectum*, and a steam kettle containing some eucalyptus oil was kept playing in the room.

At 3 p. m. he was very comfortable, and was fed by means of an œsophageal tube with brandy and beef-tea mixture. A small gum elastic tube *à boule* was first used, but it caused great discomfort, coughing, and hemorrhage; therefore a thick india-rubber (Jaques) tube was substituted, and the feeding was accomplished with ease and comfort. He complained of slight soreness of the throat, his temperature was 100.5 deg., and the pulse 72. At 1 p. m. he was fed *per rectum*; temperature 101.5 deg., pulse 84.

August 18. He slept fairly well, again fed by tube. Hahn's cannula was removed, and replaced by an ordinary tracheal tube, which was more comfortable to the patient. He spat up large quantities of blood-stained mucus, and had a slight cough. He complained of great thirst, which was relieved to some extent by the very small quantities of ice he was allowed to suck. Every four hours 20 drops of solution of hydrarg. biniod. (1 per 1000) was administered by the mouth, as a local and general antiseptic, a few drops entering the larynx during deglutition. *Râles* were heard over the left base. Morning temperature 99.5 deg.; evening temperature 101 deg.

August 29. Slept well; was again fed by tube and an enema; thirst very troublesome; chest clear; expectoration mucus very slightly stained; morning temperature 99 deg.; evening temperature 100 deg.

August 30. Enjoyed the lean part of a mutton chop, which, with some water, he swallowed with ease; he takes milk freely; tracheal tube changed, and drainage tube removed; thirst less; morning temperature 98 deg.; evening temperature 99.2 deg.

August 31. Slept well; thirst relieved entirely; abundant muco-purulent expectoration; morning temperature 98 deg.; evening temperature 99 deg.

September 1. A restless night; cough very troublesome; a few *râles* over the left base; feels depressed and dislikes food. Urine contained an excess of phosphates; otherwise normal. As bowels had not been relieved since the operation he was ordered hydrarg. subchlor. gr. ij. The tube was changed. Morning temperature 98 deg.; evening temperature 99.8 deg.

September 2. Slept better. Bowels not having been relieved, hydrarg. subchlor. gr. iij was ordered.

September 3. Slept six hours. Cough less troublesome; expectoration foetid; bowels relieved; appetite better. The superficial stitches were removed. Morning temperature 98 deg.; evening temperature 99.6 deg.

From this date his recovery was uninterrupted. On the 5th he coughed up a small portion of necrosed cartilage. The cough and expectoration gradually decreased, the temperature remained normal, and the patient rapidly regained his health and spirits. On the 8th the tube was permanently removed, and the cough ceased almost immediately. On the 14th the tracheotomy wound was closed, and on the 19th the patient went out for a short walk.

He was discharged from the hospital on the 22d in the following condition: His weight, ten stone one pound; felt strong and hearty; his complexion good, his expression bright and cheerful. Laryngoscopic examination showed on the right side an arrangement of the lining membrane singularly like a new vocal cord, and which moved on phonation; the left side was occupied by a cushion-like fullness covered with a healthy-looking mucous membrane. The voice was a good, strong whisper; his deglutition was perfect. The glandular swelling was certainly no larger, and the pain running up to the left ear no longer felt.

The parts removed were examined by Mr. Wingrave, with the following results: The right band and cord were hyperæmic, but showed no signs of growth, which was confined to the left side, and in this situation was composed of rapidly growing stratified epithelioma, involving the sacculus and ventricle, but not extending beyond the left arytenoid cartilage in the direction of the middle line.

In this case the difficulties in diagnosis were comparatively slight, as the typical appearance of the unilateral ulceration, accompanied by immobility of the vocal cord, offered a laryngoscopic picture which hardly admitted of doubt. The age of the patient, the pain shooting up to the ear, and the progress of the disease, strongly favored the idea of carcinoma, which was absolutely confirmed by the results of the microscopical examination of the fragment removed with the forceps. It is true these microscopical appearances were not utterly incompatible with the possibility of the portion examined being the apex of a papilloma. This was, however, excluded by the laryngoscopic signs, and notably by the fixation of the vocal cord. In the same way tubercle and syphilis were eliminated.



The comparative inefficiency of Hahn's admirable tampon-canula was unquestionably due to the long time that the sponge had been kept in a compressed state, and much anxiety was occasioned by the knowledge that a considerable quantity of blood and discharge, as well as some of the fluid food administered even by a carefully used tube, must have entered the bronchi during the period which elapsed prior to the reestablishment of the functions of the sphincter laryngis. How far the satisfactory progress of the case, in spite of this defect, was due to the minor details of after treatment is difficult to decide. The free use of antiseptic dressings in the form of iodoform and of alembroth gauze, the frequent use of iodide solution by syringe through the drainage tube, as well by the mouth, the continual impregnation of the inspired air with steam charged with eucalyptus, no doubt were important factors. As regards feeding the combination of alimentation by œsophageal tube in the middle of the day, with that by enema night and morning, appeared to satisfy the nutritive requirements of the patient with a minimal disturbance of the affected parts, it being generally agreed that rectal feeding alone is insufficient.

The question of recurrence can only be answered by a further observation. Meanwhile, the patient has steered clear of the dangers immediately incident to the operation.

*Note on March 9, 1891.*—The patient continues well and hearty and pursues his ordinary avocation. He is free from pain, and as regards breathing and deglutition is apparently well. The glandular enlargement is no longer perceptible. His voice, a gruff whisper, is louder than on the occasion of the last note. On laryngoscopic examination, the appearance is as before, with this difference: that during phonation the tissues forming the side walls of the infundibulum of the larynx bulge more toward each other, especially in their anterior parts, so that a better approximation to a vibrating glottis is obtained and a louder vocal sound is produced. The left arytenoid cartilage still remains fixed. There is no sign of ulceration, and so far—six months—the patient seems free from recurrence.

## MEDICINE.

### CLINICAL OBSERVATIONS ON SOME NEW PHARMACEUTICAL PREPARATIONS.

In a paper read before the thirty-fourth quarterly meeting of the North Central Ohio Medical Society, held at Mansfield, Ohio., September 26, 1890, Dr. R. Harvey Reed, of

Mansfield, says: There is one 'new remedy' which has gradually engrafted itself into my good graces which is becoming more and more permanent the longer I use it. This is what is known as 'pancrobilin' and it is a combination of pancreatin and bile, and placed upon the market in form of a liquid and a pill, of which two I consider the latter preferable.

In cases where there is a diminished quantity, or even an absence, of these natural products, especially the bile, resulting in the distressing complication of intestinal or duodenal indigestion, I have found this preparation of decided value by assisting the intestinal digestion until the normal functions of the liver and pancreas, but especially the former, could be established.

In constipation attended with flatulence, the result of an inactive liver, I have found this remedy of great value, promptly relieving the flatulence, and producing natural colored stools of a normal consistence, in place of the pale ash-colored fæces, or the dry, hard scybalæ of the chronic dyspeptic.

After a careful trial of some three years in a variety of cases affected with constipation resulting from congestion of the liver, and in cases in which there is an atonic condition of the coats of the bowels resulting in intestinal indigestion, I am frank to say that I know of no two remedies that will give as prompt relief to these conditions as the ones under consideration.

In the one class of cases the pancrobilin supplies the intestine with an artificial supply of bile and pancreatin, which digests the food that otherwise would not be digested, thus giving relief until the real difficulty with the liver can be overcome. In the other class of cases cascara sagrada tones up the intestine, increases the secretions, which in turn facilitate digestion, and relieves the constipation. — *American Lancet*.

#### SECRETION OF BILE IN A CASE OF BILIARY FISTULA.

[DR. A. W. MAYO ROBSON.]

In this paper the author gives an account of the observations made upon the biliary secretion in a patient, with obstruction of the common bile duct, and in whom an artificial biliary fistula between the gall bladder and external surface had been produced, through which the whole of the bile was discharged for fifteen months. During this time the digestion was unimpaired, bowels regular, without the use of aperients, and the odor of the fæces did not differ from that of a healthy motion.

Menstruation ceased while the fistula was patent, but became regular and normal as soon as the bile was again turned into the intestine, by operative interference.

The following are the principal conclusions which Mr. Mayo Robson draws from his observations:

1. The bile is probably chiefly excrementitious, and, like the urine, is constantly being formed and cast out.

2. Though the bile probably assists in the absorption of fat, its presence in the intestine is not necessary for the digestion of such an amount of fat as is capable of supporting life and keeping up nutrition. Much fatty matter in the patient's food did, however, produce a marked effect—a sickly feeling, loss of appetite, and more fat than normal in the fæces.

3. Increase in body weight and good health are quite compatible with the entire absence of bile from the intestines.

4. The antiseptic properties of bile are unimportant; this was tested only by the character of the fæces, which neither by odor nor aspect indicated any irregular fermentative process for the fifteen months during which no bile passed into the intestine.

5. Whatever little antiseptic quality bile may have is probably derived from its admixture with the gall bladder fluid.

6. The supposed stimulating effect of the bile on the intestinal walls is not necessary for a regular action of the bowels.

7. The quantity of bile excreted in the twenty-four hours during health in a person of average weight may vary between 39 oz. 4 dr. and 25 oz. 6 dr., with an average of 30 oz.;  $2\frac{1}{2}$  oz. of this is due to the fluid secreted by the gall bladder, as determined in a case of the author's, in which an operation for the relief of a gall bladder distended by gall stones, with stricture and occlusion of the cystic duct, was followed by a fistula of the gall bladder, from which a clear and somewhat viscid fluid issued, containing no bile constituents. This was held to be the normal secretion of the gall bladder.

8. More bile is excreted during the day than at night, the excess varying between 5 oz. and 3 dr.

9. The excretion of bile seems to go on constantly and with great regularity.

10. The excretion is apparently not materially influenced by diet.

11. The pigment of fresh human bile is biliverdin; the color of the fresh bile was always green.

12. The supposed cholagogues investigated seem to rather diminish than increase the amount of bile excreted. These drugs were—



(a) *Calomel*; 5 grs. at 7 P. M. caused a slight aperient effect the next morning, but the amount of bile excreted within ten hours after the administration was less than the amount for the ten hours before the drug was given, by over 2 oz.

(b) *Euonymin*; 4 gr., less bile was excreted in the ensuing four hours than in the four hours before administration.

(c) *Rhubarb*;  $\frac{1}{2}$  oz. and 1 oz. of the tincture could not be said to cause any increased flow.

(d) *Podophyllin* was given on one occasion, and no cholagogue effect was noticed.

(e) *Carbonate of soda*, in the form of aerated soda water, was given, and produced in two hours a maintained increased flow, not succeeded by a marked diminution.

(f) *Iridin*; 4 gr. apparently increased the flow temporarily (though a greater flow was observed at the same time of the day on other occasions when no drug had been given), but without augmenting the total quantity in twenty-four hours.

(g) *Turpentine*; 15 min. given in capsules every four hours. Although an increase was apparent on the second day, yet the daily amount of bile discharged in the twenty-four hours was not so much as on many days when no turpentine was being given. The odor of turpentine was perceived in the bile soon after its administration.

(h) *Benzoate of soda* caused no positive increase in the flow of bile, contrary to the results obtained on dogs by MM. Prévost and Binet.—*Manchester Medical Chronicle*.

#### NERVE-SYPHILIS CURED BY MERCURY ALONE.

Dr. D. D. Stewart, in the *Medical News* for April 11, 1891, gives the history of a very interesting case of syphilis of the nervous system. The patient was a dentist, age 43, who for nine years had suffered intensely from migraine, chiefly of the right side, with accompanying gastric disturbances. About November, 1887, he noticed that his gait became a trifle clumsy, and continued to grow worse, until in April, 1888, it became decidedly spastic. His speech became involved: there were ulcerations on the tongue resembling mucous patches. The patient denied, in apparent good faith, that he had ever had syphilis, but the ulcerations on the tongue and certain copper-colored cicatrices on the trunk caused Dr. Stewart to diagnose the case as one of probable nerve-syphilis. He placed the patient upon twenty-grain doses of iodide of potassium in combination with one-twentieth of a grain of bichloride of mercury, and a full dose of bromide of potassium at

night to relieve headache. In a few days the dose of the iodide was increased to thirty, and then to fifty grains, and that of the bichloride to one-fourteenth of a grain. At the end of a month there was absolutely no improvement.

It occurred to Dr. Stewart that the large doses of the iodide might have eliminated the mercury too quickly for it to produce any effect. Accordingly he placed the patient upon one-third of a grain of the mercurous iodide in pill form, combined with a little opium and belladonna, four times daily, discontinuing the iodide. The effect was astonishing. In three days there was noticeable improvement. Nocturnal headache, insomnia and restlessness had distinctly lessened. In three weeks the headache had entirely disappeared. His tongue grew clean and normal in appearance; he became able to walk about without a cane, the spastic and paralytic condition having diminished materially. Two weeks later he was able to return to his avocation. He afterwards drifted out of Dr. Stewart's hands, though he still continued to take the mercury. The amelioration of the spastic condition continued to a certain point and then ceased, as might be expected, anti-specific treatment having no power to replace lost tissue or to remove the secondary ordinary lesions.

#### REMARKS ON THE TREATMENT OF THE PYREXIA OF PHTHISIS.

By C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P., Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

Pyrexia is often a most troublesome symptom in both acute and chronic phthisis, though it is not a necessary accompaniment—certainly not of the chronic forms—and it has been known to be absent even in the acute ones. It is, however, in a large proportion of cases, the principal unfavorable symptom. When it is persistent it is impossible for the medical man to give a hopeful prognosis, and when it subsides the case assumes a most hopeful aspect. Its absence has generally been assumed to indicate quiescence of tuberculous disease, and its presence, activity; and while the latter proposition is usually true, the former is not to be always relied on, for in many cases tubercle forms and undergoes excavation without pyrexia.

The pyrexia of phthisis never reaches very high figures—a record of 105 degs. F. is very seldom attained, and the charts rarely run higher than 103 degs. A chief feature is the uniformity of the afternoon rise. On the other hand, the temperature descends, as in the early morning, very low indeed, and I have registered a reading of even 91.6 degs. The case

was one of acute lung excavation, and the range of temperature in twenty-four hours amounted to 10° degs.

A rise of temperature above 100 degs. in a case of phthisis ought always to lead to a careful search for the cause of such elevation, and it generally is to be found in extension of tuberculous disease, or in softening and excavation of old tuberculous masses, or, if a cavity be present, in its further extension; or, again, it may be traced to commencing tuberculosis in some other organ, as the lymphatic glands, the joints, the testicles, or the intestines. In a very few cases it is due to pulmonary congestion, generally affecting the bases of the lungs, though pulmonary congestion in phthisis means, as a rule extension of tuberculation.

Various theories have been put forth of late years to explain the process of fever, and, on the whole, I am inclined to adopt that of Dr. Donald McAlister, as best meeting the many difficulties which surround the subject, and as being particularly suited to the requirements of phthisical pyrexia.

Dr. McAlister divided the factors of fever into three: 1, the thermolytic or heat-discharging mechanism; 2, the thermogenic or heat-producing mechanism; 3, the thermotaxic or heat-adjusting mechanism.

Heat is discharged throughout the whole of fever—during its rise, its continuance, and its defervescence, the discharge taking place through the skin by evaporation, conduction and radiation in the ratio of 80 per cent., and through respiration in the ratio of about 20 per cent.

Heat is produced in the body by the oxidation of tissues, chiefly of muscles, which may be regarded as the furnaces of the body, the heat-producing or thermogenic function of muscle being quite independent of the contractile function, and continuing during rest, though in some degree increased by contraction. This thermogenic metabolism of muscle continues as long as blood and nerve supply are intact. If the nerve be stimulated, muscular contraction and increased production of heat result, but muscular contraction outlasts heat production. When a muscle is poisoned with curare, which abolishes the function of the nerve endings, and thus blocks the way for the transmission of impulses from the nerve trunks to the muscle, both effects are lost, and the thermal behavior of an animal, whose thermogenic tissues are thus cut off from the influence of the nervous system, is remarkable. The vasomotor system is intact, but the animal can no longer maintain its temperature. If plunged into a cooler medium the temperature falls; if transferred to a warmer one, it rises. Moreover, the practical cessation of oxidative meta-



bolism is shown by the consumption of oxygen and the exhalation of carbonic acid falling to a fraction, showing how much these processes are due to the thermogenic action of muscles, and how much this latter is due to their innervation.

Heat production in the muscle is, according to Dr. MacAlister, carried on under the influence of a twofold nervous mechanism, the one part exciting to thermogenesis, accompanied by destructive metabolism, and the other part staying thermogenesis and subserving contractive metabolism. The thermogenic tonus is the manifestation of the normal balance between these parts.

Experiments show that by the stimulation of a particular region to the inner side of the corpus striatum the thermogenic function of the muscle is abnormally increased, and this without encroaching on the motor tract, without exciting the motor function, and without any action that can be fairly called vasomotor being brought into play.

The temperature of phthisis is, as I have shown in a paper in the *Medico-Chirurgical Transactions* (vol. lviii), due to a combination of fever and collapse influence. If these are equally balanced, a chart hardly differing from the normal results; if collapse prevails, subnormal temperatures appear, and if the febrile process be in the ascendant, pyrexia shows itself.

The formation of tubercle may not cause great variation in the temperature chart from the normal, but any variations which occur take a particular form, which is visible in apyrexial cases, but is accentuated in pyrexial ones. Thus, the temperature of tuberculization is characterized by a considerable range of temperature, varying from 94 degs. F. to 105 degs. F., by afternoon pyrexia and subnormal early morning temperatures. For tuberculization without fever the curve is similar, but not so marked, the collapse influence prevailing.

Now we may look at the subnormal temperatures as instances of the thermolytic agency, where heat is being discharged in the form of night sweats. Then in the afternoon pyrexia we see the thermogenic influence giving rise to that wasting of tissues, especially of muscle, which is so characteristic of phthisis. When we examine the hectic temperatures of acute excavation we see there all the features of suppurative fever in the afternoon and evening pyrexia, followed by the rapid fall during night and early morning, and the recovery in the later morning hours. Here we appear to have more thermogenic influence in the afternoon and evening, and more thermolytic in the night and early morning, while the whole chart seems sadly to lack the thermotaxic control

shown in the hermogenic tonus, and this is still more marked in the records of advanced phthisis.

The treatment of the pyrexia of tuberculization, if the latter be limited in extent and do not amount to acute tuberculosis of the lung, may often be dealt with, and dealt with successfully, by general measures. In some cases the addition of arsenic or quinine to the tonic will suffice to reduce temperature; in other cases derivative measures in the form of free application of counter-irritation to the chest wall succeed, if combined with the promotion of large secretion from the whole bronchial tract by saline expectorants, to which the addition of aconite or digitalis is often desirable. With regard to counter-irritation, vesication, and specially with the preparations of cantharides, if applied so as to produce a large blister over the affected lung, is far more efficacious in reducing temperature than any amount of poulticing or iodine painting. The best form of expectorant in these cases is the effervescing carbonate of ammonia draught, to be given two or three times a day, to which may be added 4 to 5 minims of antimonial wine, and the same dose of tincture of aconite. This, with the ordinary precautions of rest in bed during the fever rise, reduces the heat in a great proportion of cases of tuberculization. Where these measures fail, quinine, given in an effervescing form in 3 to 5-grain doses, just before and during the rise of the temperature, is advisable. Salicylate of soda, or salicin, may also be tried. Professor Jaccoud's plan of giving hydrobromate of quinine in doses of 10 to 30 grains every night for three consecutive nights, which, he states, lowers the temperature in this stage of phthisis for four days, failed entirely in my hands in two cases in which a fair trial was given to it, though cinchonism and great mental excitement were thereby induced.

The treatment of the pyrexia of softening and excavation of tubercle is encompassed by far greater difficulties, as here we have to deal with suppurating surfaces out of surgical reach, from which reabsorption of pus and septic products with our old enemies, the tubercle bacilli, is continually taking place, and consequent infection of fresh tracts of the lung, so that we have to treat suppurative fever and the pyrexia of tuberculization in the same individual.

Small wonder is it that our efforts to reduce such fever result, for the most part, in temporary, and rarely in permanent, success. The temperature falls under treatment, but rises directly that treatment is suspended, and generally the pyrexia only subsides when excavation is for a time complete, or a cavity has still farther extended and the patient's vital powers have become more and more collapsed.

The number of medicines which have been tried to reduce the temperature of this stage is an almost endless list, which I shall not attempt to exhaust, but will enumerate those of which I have most experience. *Quinine*, in doses of from 5 to 20 grains dissolved in acid, undoubtedly will temporarily reduce temperature, but as cinchonism is soon produced, it is impossible to persevere for any length of time. The effervescing quinine draught before mentioned, combined with digitalis tincture (10 minims) is far more effectual because it can be continued longer, and I have had the best results from this antipyretic. Heim's pills, often called Niemeyer's, containing a grain of sulphate of quinine and digitalis, combined with half a grain of opium, given three or four times a day, also exercises a good temporary effect. Salicylate of soda and salicylic acid reduce temperature, but can not be continued long on account of the lowering influence of the drugs. Of the two, salicylate of soda is preferable, and, when given in 20 grain doses every four hours, soon has the desired effect, and may be afterward taken twice in the afternoon to control the pyrexia.

*Salicin*, if added in 10 grain doses to the effervescing carbonate of ammonia draught already mentioned, considerably strengthens its antipyretic effect.

*Iodoform*, in doses of 3 to 5 grains, three or four times a day, I tried in a number of cases, but with no good result whatever.

*Kairin* and *chinoline* were both so nauseous that I can not say I succeeded in persuading the patients to make a fair trial of them.

*Antipyrin* I have used very largely, and for a long time it was my principal febrifuge. It generally reduces the temperature if given for a few days in 15 to 30 grain doses every four hours, by inducing perspiration, but if persisted in, is followed generally on the eighth day by a measly rash, which disappears on the drug being omitted. Anorexia and vomiting, and sometimes collapse, have been noted in cases where antipyrin has been continued for a lengthened period, as is necessarily the case in phthisical pyrexia.

Its action is very rapid, the temperature often falling within an hour of the first dose, and the fall is often very great. I have known the thermometer fall from 103 deg. F. to 96 deg. F. in a few hours, where 20 grains were administered every two hours for a day, but it rose again when the doses were only required every six hours. This is the great difficulty—we have often to choose between pyrexia and saturating the patient with antipyrin, and in the end generally prefer even the former.



*Resorcin*, a derivative of benzol, in 10 to 25 grains has a similar effect to antipyrin, and was very successful in reducing the temperature of one case of acute consumption under my care.

*Thallin* is a very powerful antiseptic derivative of coal tar, of which I have used the sulphate and tartrate in two cases for reduction of temperature according to the recommendation of Ehrlich and Laquer.

In a case of cavity with high pyrexia, which hydrobromate of quinine had failed to reduce, but which had temporarily subsided under antipyrin when carried to the extent of producing the measly rash, after its omission thallin was tried in 1-grain doses every hour, with speedy reduction of temperature from 101.5 deg. F. to 97 deg. F., but, unfortunately, with symptoms of collapse, rigors, and a feeble pulse, and the thallin had to be discontinued.

In another cavity case one grain was administered every two hours, and the temperature was lowered in eight or ten minutes. The medicine was continued in one and one-half grain doses three times a day, but here again collapse followed, and the drug had to be omitted. For rapidity of cooling action thallin, even in small doses, surpasses all other drugs, but its effects are nearly as alarming as those produced by pyrodine, which I strongly recommend all members to have nothing to do with.

*Antifebrin* or *phenylacetamide* has given me, on the whole, good results in phthisical pyrexia. Its action is rapid, and the lowering of the temperature appears due to diaphoresis, which is sometimes long continued and may be exhausting. The great advantage of antifebrin over antipyrin and other antipyretic coal tar derivatives are (1) the small dose (five to seven grains dissolved in warm water, it being insoluble in cold), and (2) the few doses required in the twenty-four hours—as a rule, two doses a day, given at noon and 4 P. M., will suffice to keep the temperature within moderate bounds; (3) that it can be easily suited by the patient to his or her own requirements. A record of the temperature is kept, and if the chart rises above 100 deg. F. or 101 deg. F. a powder is at once taken, but if the record remains below this it is omitted. Much has been said about the danger of antifebrin in causing collapse of the circulation: all I can say is that I have administered it in the above doses to hundreds of consumptives without the slightest evil result; and I regard it, on the whole, as one of the best antipyretics available for the pyrexia of phthisis. It speedily lowers the temperature 2 or 3 deg. F., which effect remains as long as the antifebrin is taken.

*Phenacetin* has been found useful in some few cases where antifebrin failed. The dose is smaller and the sweating not so profuse. I once tried hypodermic injections of *carbolic acid* of strength varying from 1 in 30 to 1 in 50, in accordance with the advice of M. Leon Petit, of Paris, who informed me that the reduction of phthisical pyrexia by these means was complete. Two female patients, with well-marked third stage pyrexia, were selected, and 15 minims of a 5 per cent. solution of carbolic acid were injected before the fever rose every day for a fortnight, the dose being gradually increased to 30 minims. The result was purely negative, but the patients did not complain of the proceeding.

In another case the hypodermic injection of *guaiacol* was performed on a hospital patient of mine by a German physician, who reported most satisfactory results from this treatment in his own country. The dose was 18 minims of an alcoholic solution, and it was injected under the skin of the thigh, the temperature being then 101.8 degs. The patient complained of a slight burning pain over the puncture spot, which soon passed off. Half an hour later she felt very hot and perspired profusely, the temperature falling to 97.4 deg. Two hours later symptoms of collapse came on, and for two hours the temperature was so low that the thermometer failed to register it. By 10.30 p. m., under stimulating measures, the patient had recovered, and the temperature rose first to 96.4 deg., and by 12.30 to 101.4 deg. I need hardly to say the experiment was not of a character to encourage or justify repetition.

*Cold Applications.*—Some eighteen years ago I published three cases of pyrexia of phthisis treated by cold baths, where consumptives with high fever were immersed in water at 90 deg. F., which was rapidly cooled to 60 deg. F. The reduction in all cases was very decided, and in one case amounted to 6 deg. In all three cases the temperature rose again, but in two of them the bath seemed to be the starting points of improvement in appetite and strength, breathing, and physical signs, and moreover, in these two, the records were never so high after the bath, and the pyrexia gradually subsided. The third case was an advanced one, with double cavities, and the temperature was lowered, but not permanently. In neither of the patients was any congestion of the lungs or bronchial catarrh induced by the baths.

However, cold baths are at best a clumsy arrangement, and quite inadmissible in many instances, and so I next tried tepid sponging of the body in several cases, with great refreshment to the patient. The ice pack was also tested in some in-

stances of severe pyrexia, and found effective for reduction of temperature, though difficult of frequent application. Finally at the suggestion of the late Dr. Wilson Fox, I tried Chapman's spinal ice bags, arranging that the patient, should wear one of these for a few hours each day whenever the temperature rose above 100 deg. F. This reduced the temperature decidedly for the time, and added greatly to the patient's comfort.

A natural question arises here: Is it advisable to reduce the pyrexia of phthisis at all? We do not thereby stop the tuberculous process; and as regards the wasting, I have shown elsewhere that pyrexia in phthisis is compatible with gain of weight, provided the diet be of sufficiently abundant and nutritive character. In most cases the reduction of temperature is attended with a certain degree of comfort to the patient. But even to this statement there are exceptions, for occasionally patients, when the pyrexia is reduced by antifebrin or antipyrin, experience such uncomfortable sensations—chiefly of oppression—that they prefer the high fever to the effect of the antipyretic.

Two agencies which sometimes prove powerful antipyretics must be mentioned. One is confinement to bed. This I have seen by itself reduce temperature to the extent of 2 deg. or 3 deg. F. The other is sleep, which will reduce temperature 2 deg. and more at a time without any medicines.

My conclusions as to the treatment of pyrexia in phthisis are:

1. The pyrexia due to tuberculization is best dealt with by derivative measures, such as counter irritation, salines promoting secretion from other organs, and assisting expectoration.

2. That in the treatment of the pyrexia accompanying softening and excavation, measures which hasten these processes are found to be most successful, especially if combined with antiperiodics, such as quinine, salicin, salicylate of sodium, to moderate the fever.

3. That the use of medicines solely directed to lowering the temperature of the body without promoting increase in the natural secretions is generally inadvisable.

4. That our object in the treatment of phthisical pyrexia should be, not the reduction at all hazards of the temperature, but its lowering to the limits compatible with the comfort and well-being of the patients, and for this end that much may be done, in addition to the discriminating use of medicines, by the simple means of frequent food combined with stimulants and rest in bed.—*British Medical Journal*.



## PERITYPHLITIS COMPLICATING TONSILLITIS.

F. ROWLAND HUMPHREYS, L.R.C.P., London.

This case is of interest, as it bears on the connection between the two complaints.

Mrs. F., aged 63, taken with the ordinary signs of acute tonsillitis on November 5 last. She was very bad for a week, suffering from great weakness. The left tonsil was especially affected, and the glands along the front border of the left sterno-mastoid were swollen and tender for some fourteen days. On November 19 she complained of severe intermittent pain along the brim of the pelvis on the right side to the anterior superior spine. There was great tenderness along the region of the transverse colon, and the flanks were dull to percussion. On the 21st there was a well-defined tumor  $1\frac{1}{2}$  inches in diameter, whose edge was  $\frac{1}{2}$  inch from the anterior superior spine; it was dull to percussion. The pain extended to the front of the right knee, and she had some trouble in micturating. On the 22d, as previously, she complained much of the free perspiration, and now had erythema of the face and forehead. Up to December 1 she suffered from pain down the leg; the tenderness lasted till November 27. She suffers from aortic regurgitation and stenosis, is liable to attacks of acute bronchitis, and was attended by me in 1887 for acute tonsillitis.—*British Medical Journal*.

## DERMATOLOGY AND HYGIENE.

## RED STOCKINGS.

The *Journal d'Hygiene* reports an interesting fact recently submitted for the consideration of the Council of Hygiene and Public Health, in the Department of the Seine.

A number of infants had been attacked with a severe irritation of the skin and itching after having worn stockings dyed red. One of them presented symptoms resembling active poisoning.

An inquest was ordered by the Prefect of Police, and two pair of stockings were enclosed in a sealed package and sent to M. Schutzensberger for examination.

The learned specialist of the Council of Hygiene found that the color of these stockings had been obtained from a coloring matter analogous to congo (the coloring principle of benzidine or of tobedine), associated, very probably, with another red coloring matter derived from aniline or its analogues.

As a mordant it was necessary to employ tannin and tartar emetic or tartarized antimony.

The examination for arsenic gave positive evidence of its existence, but in quantity too small to permit any responsibility for the accidents to be attributed to it.

In regard to the oxide of antimony, the case was different, for it was found in large quantity.

"Under the influence of the cutaneous perspiration," said M. Schutzemberger, "a part of this agent may be dissolved and cause an irritation of the skin, with the formation of pustules. It is known that the ointment having tartarized antimony for its base is employed for this purpose. If different kinds of material dyed in this way with tartar emetic and tannin cause no inconvenience so long as they are separated from the skin by some other inoffensive material, it is not the same with stockings, which rub directly on the epidermis and cause irritation, more or less extensive and penetrating, when they contain agents such as the oxide of antimony, which may be dissolved by the action of the perspiration."

Having heard the report of M. Schutzemberger, the Council of Hygiene decided that the use of stockings dyed with the aid of metallic preparations should be proscribed and considered as dangerous, especially in the case of infants.—*Sanitarian*.

#### INFECTION FROM MILK.

In the *Glasgow Medical Journal* for October appears an account of an epidemic of erysipelas and sore throat, occurring among families supplied with milk from a certain farm. The most striking symptom was an intense inflammation of the fauces, resembling erysipelas of the mucous membrane, with swelling of the glands of the neck and in some cases suppuration. In some, true erysipelas of the skin developed. The temperatures ranged from 102 deg. to 105 deg. during the first few days of an attack. Convalescence was attended by extreme prostration. No bacterial examination was made, but a clear connection was traced between the milk and the epidemic.—*Dietetic Gazette*.

#### IODIDE OF POTASSIUM IN THE TREATMENT OF URTICARIA.

Stern has successfully treated five cases of chronic urticaria by the administration of iodide of potassium, four of the cases having been rebellious to all the measures usually employed in this disease. The fifth case was one of acute urticaria of a few days' duration. None of the patients were syph-

ilitic, and all were rapidly cured. In one case which had lasted for four months the intolerable itching disappeared on the second day of treatment, and a complete cure was obtained after two and a half drachms of the iodide had been administered. In two other cases, one of two years' and the other of six years' duration, the effect of the iodide was equally good, cure following the administration of six and eight drachms respectively.—*London Medical Recorder*.

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#### ADULTERATION OF PHENACETIN.

More than two years ago the likelihood of the adulteration of phenacetin with antifebrin was pointed out by Schwarz, Schröder and Hirschsohn, owing to their great resemblance in physical and chemical respects, and to the difference in the commercial values, phenacetin being at that time about fifteen times the price of antifebrin. All three observers indicated tests by which such adulteration could be detected, but in spite of their very timely warning a case in Elberfeld exhibiting toxic symptoms has recently occurred, and on investigation it was found that the powder supplied, when phenacetin had been ordered, consisted of equal parts of phenacetin and antifebrin or acetanilide.—*Boston Medical and Surgical Journal*.

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#### EXANTHEM PRODUCED BY RHUBARB.

M. Litten (*Therapeut. Monatshefte*, December, 1890), records a case of severe skin eruption caused by rhubarb. The patient, a workman aged 45, presented himself at the Policlinic. His face was very much swollen and covered with scabs, mixed with abundant sanguineous and purulent exudation. The scalp, beard, eyelids and lips were all involved. On further examination, the whole body was found to be covered with a polymorphous eruption, which, however, presented two special types namely, hemorrhagic eruptions and pustules. The hemorrhages were scattered all over the body, and varied from the size of a bean to that of a small plate, the color being of all shades between bright blood-red and brown. The pustules were also scattered plentifully over the whole body, and resembled those of pemphigus. In some places the individual pustules had become confluent and covered large areas. On the dorsum of the hands the blebs were filled with clear fluid, which had not gone on to pus formation. Removal of the scabs left shallow, dirty looking ulcers.



The lymphatic glands were swollen and painful. Similar eruptions were present on the mucous membrane of the eyes, nose, lips, mouth and throat, accompanied with great swelling. The tongue was also much affected, and this, together with the general condition of the mouth, prevented proper articulation. Blood was frequently passed from the urethra, but sometimes the urine was wholly free from it. The temperature was 103.3 degrees Fahrenheit. The patient felt strong and well, and complained only of the eruption. The urine contained neither albumen nor sugar, but was of a deep brownish yellow color, and, on adding solution of caustic soda, became deep purple red. The other systems were quite normal. The patient attributed the eruption to the following prescription, which he had been ordered for constipation: *R* sod. bicarb., gr. 120, infus. rhei. rad.  $\zeta$ vi. He knew that rhubarb did not agree with him, as he had previously had slight skin eruptions after its use. He took half the above mixture at one draught in the morning, and shortly after suffered from rigors and pains in the limbs. During the evening his face, lips and tongue began to swell, and next morning the eruption was fully developed, as, described above. When the patient had recovered, Litten administered to him another dose of rhubarb with the same result. Chrysophanic acid had no effect.

Litten states that no other similar case has been recorded, but Goldenberg (*New York Med. Jour.*, December, 1889) described a similar, but less severe, instance of the same idiosyncrasy to rhubarb. The patient, a man of middle age, had been taking a mixture of rhubarb powder and soda for constipation, and had consumed in all 120 grs. of pulv. rhei. rad. He awoke one morning with burning sensation in his face, and found it covered with blisters and pustules. When Goldenberg saw him during the day, the face was covered with brownish-red irregular pustules (a woodcut is given) about the size of a pea to that of a bean, and deeply infiltrated at the bases. There were a good many crusts, on removing which a moist, bleeding, fungoid surface was left. It was also present on both surfaces of the hands. The whole disappeared in a few weeks without treatment, leaving bluish pigmentation, but no cicatrices. It closely resembled pemphigus. There was no fever, and the general health was excellent. Goldenberg administered rhubarb to the man on two subsequent occasions, and each time a similar eruption appeared.

## OBSTETRICS.

## PLACENTA PRÆVIA.

## TREATMENT BY ERGOTOLE.

Dr. W. Wysham, of Catonsville, Md., says: In a case of placenta prævia with terrific flooding, when the fluid extract of ergot could not be retained by the stomach, "ergotole," a most concentrated and efficient preparation of ergot, manufactured by Sharp & Dohme, of Baltimore, Md., was used with the greatest satisfaction, and I am particularly pleased with it. I administered ten minims hypodermically, and it acted magically. I think that the profession should be made acquainted with its valuable properties, as I consider it the duty of every physician to do all in his power to make known a remedy which he has seen save human lives, as the "ergotole" certainly did in this frightful case of flooding. I have used it in other cases when the fluid extract could not be retained by the stomach, and I regard it a most valuable addition to the science of therapeutics.

## BOOK REVIEWS AND NOTICES.

*Plain Talks on Electricity and Batteries, with Therapeutic Index*, for general practitioners and students of medicine. By Horatio R. Bigelow, M. D., Philadelphia, P. Blakiston, Son & Co., 1891, pp. 85.

This little book is indeed *multum in parvo*. It gives the the "kernel" of our practical knowledge of electricity as applied in medicine. There is nothing original in it, but it gives to busy practitioners some condensed information on an important subject. The terms employed in electricity are briefly but clearly defined; the various kinds of electrical apparatus are described and their uses pointed out, and a therapeutic index closes a concise summary of about all that a general practitioner of a practical turn of mind cares to know about electricity as applied to the relief of disease.

A. McS.

*The Post Graduate Clinical Charts*, designed for use in hospitals and private practice. Arranged and published by Wm. C. Bailey, M. D., and J. H. Linsley, M. D., 1891.

These charts were designed by these gentlemen to meet the needs felt in the course of studies with the Koch fluid, conducted at the Post Graduate Hospital, New York. Dr. Bailey was in charge of the wards in which the Koch treatment was carried out, and he felt that something more was needed than was offered by the clinical charts in common use. The result of his efforts to meet increased wants is seen in the splendid charts before us. The first page contains two figures of the chest, front and rear, on which may be marked what changes are found in the lungs. The headings for inquiry are very complete. The second page has six figures of the larynx, and is ruled for eight weeks of observation. On these laryngeal records may be noted the alterations produced in a case of tubercular laryngitis by the action of the "tuberculin." The next four pages give finely ruled charts for temperature, pulse and respiration, and the last four pages are devoted to general notes, under printed headings, number of milligrams injected, etc. Altogether, these clinical charts are the most complete that we have ever seen.

A. McS.

*Diseases of the Digestive Organs in Infancy and Childhood*, with chapters on the investigation of disease; the diet and general management of children, and massage in pædiatrics. By Louis Starr, M. D., Late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia; Consulting Pædiatrist to the Maternity Hospital, Philadelphia, etc. Second Edition. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1891. [For sale by Hawkins & Co., New Orleans, price \$2.]

The second edition of Dr. Starr's book has been perused by us with much interest.

In addition to the attractions of good print and good paper, there are also good illustrations. The subject is handled by one familiar with the diseases treated, and with a simplicity of style that makes the reading easy even to a medical man.

Though giving the details of the general management of children in health as well as in disease, there is nothing superfluous.

The prescriptions are simple and satisfactory. Altogether, the work is one which will amply repay the reader with many valuable suggestions and much useful knowledge.

H. W. B.



*Examination of Water for Sanitary and Technical Purposes.* By Henry Leffmon, M. D., Ph. D., Professor of Chemistry in the Women's Medical College of Pennsylvania, in the Pennsylvania College of Dental Surgery and in the Wagner Free Institute of Science; Pathological Chemist to the Jefferson Medical College Hospital, and William Beam, M. A., Demonstrator of Chemistry in the Pennsylvania College of Dental Surgery, Associate of the Society of Public Analysts of Great Britain, formerly Chief Chemist B. & O. R. R. Second edition, revised and enlarged, with illustrations. Philadelphia: P. Blakiston, Son & Co., 1891. For sale by Armand Hawkins, 194 Canal street, New Orleans. Price \$1.

In the April number of this journal, 1890, we reviewed the first edition of this work, giving it, for the most part, a favorable notice. We took occasion, however, to comment upon the absence of sufficient reference in the book to recent biological researches, without which any analysis of water must be not only incomplete, but defective. The authors have seen this glaring defect in their first edition and wisely corrected it, so that instead of three pages of generalizations there are now fourteen pages of valuable information upon this subject.

The chapter on the purification of water has been added to and improved,

In addition to these changes a number of wood cuts have been inserted. Altogether, the second edition is a decided improvement upon the first.

H. W. B.

*Diabetes: Its Causes, Symptoms and Treatment.* By Charles W. Purdy, M. D. Philadelphia: F. A. Davis, 1890. (No. 8 in the Physician's and Student's Ready Reference Series.)

Dr. Purdy gives a concise statement of our actual knowledge concerning a disease which has long been a reproach to the medical profession. After giving a historical and geographical sketch of diabetes, he proceeds to the physiology and pathology of the organs concerned in the production of the disease. The etiology of diabetes is a most interesting subject and at the same time a rather obscure one. Some months ago we had the pleasure of reviewing a work on diabetes by Dr. Emil Schnee, of Carlsbad, who for over twenty years enjoyed exceptional advantages for the study of diabetes. In 1880 Dr. Schnee discovered, as he thought, that *true* diabetes, not merely transient glycosmia, is caused by hereditary syphilis; and, armed with this knowledge, he has since that date

definitely cured all those of his patients who were not hopelessly broken. In the month of March of this year Dr. Schnee visited New Orleans, and in a conversation with the writer he again insisted on the importance of hereditary syphilis as the prime etiological factor. Dr. Purdy mentions that Schnee has insisted that inherited syphilis is the most frequent of all causes; but he does not agree with the Austrian author, since in his experience the effects of inherited syphilis are developed, as a rule, at an earlier period in life than diabetes.

While, in matters of opinion, two great men may differ, still the results of practical experience, as claimed by Schnee, are such as to compel us to waive opinion and try to secure as happy effects in the treatment of this formidable disease as seem to be the every-day fruits of Schnee's method at Carlsbad. When a trustworthy observer says he has obtained definite results we must put theoretical considerations in the background and try to imitate him.

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*A Text-Book of the Diseases of the Ear*, by Dr. Josef Gruber, Professor of Otology in Imperial Royal University, of Vienna, etc. Translated from the second German edition and edited by Edward Law, M. D., etc., and Coleman Jewell, M. D., etc.; with 150 illustrations and seventy colored figures on two lithographic plates. New York: D. Appteton & Co., 1890. [New Orleans: Hawkins & Co., 194 Canal street. \$5.]

The publication of this excellent translation of Prof. Gruber's work places before Americans physicians a thorough, comprehensive, systematic treatise on diseases of the organ of hearing. The only defect that can be found in the book is the too meager section on the functions of the different parts of the ear, but this failing becomes less when we remember that Gruber's work is intended to enable physicians to recognize and treat diseases of the ear, and does not pretend to teach physiology.

Prof. Gruber's text-book is the work of a man who is self-taught, and who has personally felt the needs and difficulties of those who desire to master this branch of medical knowledge. Impressed with the absolute necessity of a thorough knowledge of the anatomy of the ear, he has devoted a large part of his book to a most thorough description of the gross and minute structure of the temporal bone and the delicate organ that it contains in its flinty interior. One hundred and ten pages are devoted to anatomical considerations and seven pages to physiology.

A general part of the work contains careful and thorough descriptions of the methods of examining the ears, and also general notions concerning aural pathology and therapeutics. The special part takes up in succession the various portions of the auditory apparatus and systematically discusses the diseases of each. The directions for treatment are most explicit. In treating of catarrhal affections of the middle ear, Gruber very properly lays great stress upon the causative influence of adenoid vegetation in the naso-pharynx. Here in New Orleans, where the climate may be said to breed catarrh, the occurrence of these vegetations (chiefly in children, of course) is very frequently noted; and at the special hospital in this city scarcely a day passes that does not witness one or more operations for the removal of these troublesome growths.

It is difficult to select for notice any particular part where there is so much that is excellent. The engravings are numerous and artistic. In the front of the book there are two lithographic plates containing seventy colored figures, showing the appearance of the drum in health and in the most varied diseased conditions.

To sum up: Prof. Gruber's work is a complete, systematic treatise, representing the most advanced state of knowledge of that special branch of medicine.

A. McS.

J. B. Lippincott Company will, beginning with April, issue quarterly thereafter a work entitled "International Clinics." This work will comprise the best and most practical clinical lectures on medicine, surgery, gynæcology, pediatrics, dermatology, laryngology, ophthalmology and otology, delivered in the leading medical colleges of this country, Great Britain and Canada. These lectures have been reported by competent medical stenographers and thoroughly revised by the professors and lecturers themselves. The object of the work is to furnish the busy practitioner and medical student with the best and most practical clinical instruction in concise form. Each volume will consist of over 350 octavo pages, illustrated with photographic reproductions of important cases.

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## NECROLOGY.

DR. G. B. UNDERHILL.

*Mr. President and Gentlemen Austin Medical Society:*

It is my sad duty to announce to this society the death of an honored member, Dr. G. Breaux Underhill. Dr. Under-



hill died in New Braunfels, Texas, December 10, 1890, and his remains were interred in Lafayette Cemetery, New Orleans, La., on the 12th inst.

Before offering suitable resolutions, I desire to pay humble tribute to his memory, and to express my own sorrow for the death of him who, as a man, possessed talents and virtues worthy of emulation; who, as a friend, was warm hearted, generous and true; who, as a physician, stood in the front rank of his profession, and, though himself diseased and conscious of an early grave, heroically gave of his waning strength to help the feeble and comfort the poor.

The subject of this memorial was born in New Orleans, La., on the 9th of June, 1853. He inherited a nature gentle and refined, and possessed a mind too broad to harbor malice or envy for his fellow-men. As an only son he was given every advantage of education, and in his early manhood graduated with honor at Trinity College, Hartford, Conn. His restless mental and physical energy urged him onward to the goal for which nature had best fitted him, and putting aside the temptation of a life of ease and idleness, which wealth held out to him, he resumed the arduous work of student life by entering upon the study of medicine in the University of Louisiana.

Graduating in due time he at once left for Europe and spent several months in further studies at the universities of Vienna and Heidelberg. After an absence of two years he returned to his native city and was tendered and accepted the position of visiting physician at the Charity Hospital. This position he held for two years, and until failing health prompted his resignation. Broken down physically, he was induced to seek our sunny clime, and, with a forlorn hope, he came in 1886 and spent the remainder of his days among us.

As a member of this society you each knew him as a cheerful, earnest worker; but few knew of his heroic struggle that ended in death. Being a physician, he was painfully conscious of his certain and speedy doom, and yet with philosophic calmness he awaited the end.

His well-stored and disciplined mind long dominated the frail body, and a number of medical contributions from his pen affirm his intellectual energy. His papers on "The Influence of Malaria on the Upper Abdominal Viscera," and "Continued Fevers," read before the society, were of more than ordinary merit and were well received by this body. But now his life's work is ended, and the name of G. Breaux Underhill is forever erased from the roll of the living. The records of this society prove him to have been a worthy brother while living;

let these records also attest our deep sorrow that he is dead. I offer, Mr. President, the following resolutions:

*Resolved*, That the Austin Medical Society has heard with profound sorrow of the death of Dr. G. Breaux Underhill.

*Resolved*, That this Society has lost a faithful brother and the profession a gifted son.

*Resolved*, That our sincere sympathy is with his sorrowing family.

*Resolved*, That these resolutions be spread on the minutes of this Society, and the family be furnished with a copy of the same.

A. GARWOOD, M. D.

The above memorial and resolutions were unanimously and feelingly adopted by the Society.

T. J. BENNETT,  
*Secretary.*

#### PUBLICATIONS RECEIVED.

Examination of Water for Sanitary and Technical Purposes. By Leffman & Beam.

Diseases of the Digestive Organs in Children. By Louis Starr, M. D.

A Guide to the Practical Examination of Urine. By James Tyson, M. D.

Diabetes: its Causes, Symptoms and Treatment. By Thos. W. Purdy, M. D.

A Compendium of Gynæcology. By H. Morris, M. D.

Essentials of Surgery. By Edward Martin, M. D. Fourth edition.

The International Medical Annual and Practitioners' Index. 1891. E. B. Treat & Co.

The Relation of Life Insurance to Inebriety. By T. D. Crothers, M. D.

A Clinical History of Twenty-two Cases of *Filaria Sanguinis Hominis*. By P. G. de Saussure, M. D.

Thirteenth Annual Report of the Presbyterian Eye, Ear and Throat Charity Hospital, Baltimore, 1890.

The Rational Treatment of Uterine Displacements, based upon a consideration of the pathological conditions present. By Augustin H. Golet, M. D.

Atmiatria. Nuevo aparato atmiatríco Valenzuela para las inhalaciones de azoe, naftot, ácido osníco, etc.

Exposicion de Varios Casos de Sifilis y de Algunas Anomalías Anatómicas del Aparato Genital de la mujer, por el Dr. D. Juan Soler y Buscalla.

Sexual Neurasthenia, its hygiene, causes, symptoms and treatment. By George M. Beard, A. M., M. D. Edited by A. D. Rockwell, A. M., M. D. Third edition.

Cosmetics. A treatise for physicians and pharmacists. By D. Heinrich Paschkes.

Materia Medica and Therapeutics, with special reference to clinical application of drugs. By John V. Shoemaker, A. N., M. D. Vol. II.

Medical Symbolism in connection with historical studies in the art of healing and hygiene. Illustrated. By Thomas S. Sozinsky, M. D., Ph. D.

Fever: its pathology and treatment by antipyretics. By Hobart Amory Hare, M. D., B. Sc.

Electricity, its application in medicine. By Wellington Adams, M. D.

Taking Cold. By F. H. Bosworth, M. D.

## MEDICAL ITEMS.

COMMENCEMENT EXERCISES OF THE MEDICAL DEPARTMENT  
OF TULANE UNIVERSITY, OF LOUISIANA.

The fifty-seventh annual commencement exercises of the Medical Department of Tulane University of Louisiana were held in the Grand Opera House, on April 1, 1891. Dr. S. E. Chaillé, Dean of the Faculty, read his annual report and Judge W. W. Howe read his annual address. Following is a list of the graduates:

GRADUATE IN MEDICINE—J. G. Aiken, Louisiana; L. B. Arceneaux, Louisiana; O. M. Armstrong, Mississippi; W. G. Armstrong, Louisiana; G. R. Beard, Louisiana; E. M. Beasley, Mississippi; P. J. Behrend, M. Ph., Louisiana; M. C. Bell, Texas; W. J. Bell, A. B., Alabama; J. A. Biggs, Louisiana; J. A. K. Birchett, Mississippi; A. H. Black, Georgia; E. S. Boatner, Texas; W. W. Bouldin, Texas; E. Bourgeois, A. B., Louisiana; T. J. Box, Louisiana; C. Brannon, Florida; W. E. Brown, Texas; A. B. Bugg, Louisiana; L. F. Burges, Louisiana; M. O. Burke, A. B., Alabama; F. E. Burns, Louisiana; R. Caffery, Texas; M. Calliham, Louisiana; D. Campbell, New Zealand; A. M. Charlet, A. B., Louisiana; H. S. Cocram, B. S., Texas; R. L. Denman, Texas; J. A. Dilworth, Texas; J. E. Doussan, A. B., Louisiana; G. R. Eckles, Mississippi; T. F. Elkin, Mississippi; T. C. W. Ellis, Jr., Louisiana; Geo. Engmann, Mexico; T. M. Fleming, Texas; H. Flowers, B. P., Mississippi; St. Mark Fortier, M. Ph., Louisiana; F. S. Furman, Louisiana; R. E. Gattin, Mississippi; F. J. S. Gilbert, Louisiana; A. A. Gillis, Florida; D. W. Goodman, Mississippi; R. D. Greening, Louisiana; S. S. Guerrant, Virginia; R. L. Hagaman, Louisiana; L. Hanemann, A. M., Louisiana; W. W. Harper, A. B., Alabama; W. S. Harrell, Louisiana; L. H. Howard, Mississippi; E. C. Hunt, Mississippi; G. Y. Hunter, South Carolina; G. H. Jones, Louisiana; H. Kilpatrick, Louisiana; E. R. Knolle, B. C. E., Texas; W. H. Knolle, B. C. E., Texas; C. J. Lanfried, Louisiana; J. W. Lea, Louisiana; Alex. Ledoux, Louisiana; J. L. Leopold, B. S., Louisiana; D. A. Lines, Louisiana; W. C. Lipscomb, M. D., Texas; R. L. Long, Texas; R. L. Luckett, Jr., Louisiana; S. M. Lyon, B. S., Louisiana; J. H. McBride, Texas; J. F. McCaleb, A. B., Louisiana; M. E. McClure, Texas; D. R. U. McMickin, Texas; Landy McMillan, Mississippi; T. M. McMillan, Alabama; E. D. Martin, Louisiana; W. R. Nail, Texas; A. F. Newbury, Louisiana; J. A. Pannell, Texas; E. T. Parker,



Alabama; W. E. Parker, Louisiana; M. K. Patton, A. B., Alabama; F. Philips, Jr., Florida; J. S. Price, Texas; R. L. Raby, Texas; Thos. Ragan, Louisiana; C. Rainwater, Arkansas; N. A. Kilgore, Texas; C. L. Ramage, M. D., Louisiana; J. N. Rape, Mississippi; C. E. Riggs, Louisiana; A. E. Robin, B. S., Louisiana; W. H. Robin, Louisiana; W. A. Russell, Mississippi; V. O. Schayot, Louisiana; F. D. Smythe, Mississippi; J. L. Sowell, Alabama; Thos. Stark, Louisiana; C. B. Stephenson, South Carolina; S. L. Theard, A. B., Louisiana; F. M. Thigpen, A. B., Alabama; M. A. Thomas, Texas; R. L. Turner, B. S., Mississippi; T. M. Walker, Mississippi; J. T. Warford, Kentucky; B. S. Warren, Alabama; J. Mc. Wells, Mississippi; J. H. Wood, A. B., Texas; J. M. Woodson, Texas; J. S. Wootters, Texas.

MASTERS OF PHARMACY—L. A. Cantrell, N. O. Cretien, Louisiana; A. G. Cockrell, Texas; J. Courtade, J. P. Leake, W. F. Leininger, D. A. Lines, G. A. Martin, M. D., John Montluzin, Louisiana; G. L. Moore, Mississippi; S. L. Postell, J. E. Scott and J. F. Simon, Louisiana.

#### STAMPING OUT GLANDERS IN CENTRAL LOUISIANA.

The Rapides Parish Stock Sanitary Commission visited the plantation of Mr. C. W. Carruth, near Alexandria, last week, for the purpose of examining the stock on the place said to have the glanders. They found the disease developed in its worst form and decided to have all the mules and horses killed and the stables burned.

On last Tuesday Sheriff Stafford and deputy visited the plantation and killed twenty-two head of horses and mules by shooting them. Only five head had the disease, but as the others were liable to contract same, it was thought best by the commission to have all on the plantation killed.

On Wednesday all the stables and outbuildings on the plantation were burned by the sheriff, and it is to be hoped that the disease has been completely eradicated.

We learn that the parish will pay Mr. Carruth the sum of \$1500 for damages.—*Town Talk*.—*Louisiana Sugar Boxer and Farm Journal*.

#### ETHER DRINKING IN IRELAND.

The evidence given before Sir Lyon Playfair's Committee on British and Foreign Spirits fully confirms the statement made in Mr. Ernest Hart's address on ether drinking. Some of these statements were questioned at the time in the public

press, but it is now clear that the prevalence and injurious nature of the practice was under rather than over-estimated. The Rev. Dr. Carter, rector of Cookstown, stated in his evidence on March 10, that in his district ether drinking was not a rarity, but a common practice, and was on the increase. It had even extended to children, who obtained it from beggar women who tramped the country with a bottle of ether in their pockets. They exchanged the drug for eggs, and it thus came about that children frequently came to school smelling strongly of ether. On market days, the witness stated, a great number of people kept themselves drunk all day for sixpence. They took two pennyworth of ether at 10 o'clock, again at 1, and again at 4. He also stated that ether was now sold more by grocers than by chemists, who were to some extent deterred by the Sale of Poison Act. Mr. Wilkinson, secretary of the Irish Temperance League, and Mr. Thomas M'Kenzie Ledlie, a Dublin journalist, gave similar evidence.

—*British Medical Journal*.

#### CHARITY HOSPITAL.

At a meeting of the Board of Administrators of the Charity Hospital, held on April 6, 1891, the following outgoing and graduating resident students received the Hospital certificates for good record and good examinations: Messrs. Parker, Cocram, Thigpen, Harper, Martin, Armstrong, Fortier, Robin and Smythe.

The visiting staff of the hospital for six months, beginning with April, is as follows:

Physicians—Drs. J. H. Bemiss, F. H. Brickell, P. E. Archinard, I. P. Deloup, J. M. Soniat, S. M. Fortier, J. T. DeGrange, A. LeDoux, Henry Bayon, J. H. Lamb, H. S. Cocram, R. U. Borde, Wm. E. Parker.

Surgeons—Drs. G. B. Lawrason, P. Michinard, J. F. Schmittle, W. S. Bickham, C. Chassaignac, F. W. Parham, R. Matas, H. J. Scherck, J. Laurans.

Laryngologists—Drs. J. E. Fitch, E. W. Jones.

Oculists—Drs. E. W. Jones, H. D. Bruns.

Dermatologist—Dr. H. W. Blanc.

Dentist—Dr. A. G. Friedrichs.

Dr. Greer Armstrong has been appointed assistant house surgeon of the Touro Infirmary.

Dr. Denègre Martin has been appointed house surgeon of the Hospital for Women and Children on St. Joseph street.

## MORTUARY REPORT OF NEW ORLEANS.

FOR MARCH, 1891.

| CAUSE.                          | White | Colored | Male | Female | Adults | Children | Total |
|---------------------------------|-------|---------|------|--------|--------|----------|-------|
| Fever, Yellow .....             |       |         |      |        |        |          |       |
| “ Malarial (unclassified)....   | 7     | 5       | 5    | 7      | 5      | 7        | 12    |
| “ Intermittent .....            |       | 1       |      | 1      |        | 1        | 1     |
| “ Remittent .....               | 4     | 1       | 2    | 3      | 5      |          | 5     |
| “ Congestive .....              |       | 1       | 1    |        | 1      |          | 1     |
| “ Typho-Malarial .....          |       |         |      |        |        |          |       |
| “ Typhoid or Enteric .....      |       | 1       | 1    |        | 1      |          | 1     |
| “ Puerperal .....               |       |         |      |        |        |          |       |
| Scarlatina .....                |       |         |      |        |        |          |       |
| Small-pox .....                 |       |         |      |        |        |          |       |
| Measles .....                   | 11    |         | 6    | 5      |        | 11       | 11    |
| Diphtheria .....                | 3     | 1       | 4    |        | 1      | 3        | 4     |
| Whooping Cough .....            |       |         |      |        |        |          |       |
| Meningitis .....                | 5     | 2       | 6    | 1      | 2      | 5        | 7     |
| Pneumonia .....                 | 20    | 20      | 26   | 14     | 18     | 22       | 40    |
| Bronchitis .....                | 6     | 4       | 6    | 4      | 2      | 8        | 10    |
| Consumption .....               | 41    | 25      | 29   | 37     | 64     | 2        | 66    |
| Cancer .....                    | 14    | 5       | 7    | 12     | 19     |          | 19    |
| Congestion of Brain .....       | 8     | 2       | 5    | 5      | 9      | 1        | 10    |
| Bright's Disease (Nephritis) .. | 11    | 5       | 10   | 6      | 16     |          | 16    |
| Diarrhœa (Enteritis) .....      | 15    | 4       | 11   | 8      | 15     | 4        | 19    |
| Cholera Infantum .....          | 3     |         | 1    | 2      |        | 3        | 3     |
| Dysentery .....                 | 1     |         |      | 1      | 1      |          | 1     |
| Debility, General .....         | 2     | 5       | 4    | 3      | 7      |          | 7     |
| “ Senile .....                  | 14    | 9       | 14   | 9      | 23     |          | 23    |
| “ Infantile .....               | 7     | 1       | 2    | 6      |        | 3        | 8     |
| All other causes .....          | 172   | 92      | 148  | 116    | 175    | 89       | 264   |
| TOTAL .....                     | 344   | 184     | 288  | 240    | 364    | 164      | 528   |

Still-born Children—White, 16; colored, 8; total, 24.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 22.37; colored, 31.77.  
total, 24.94.



## METEOROLOGICAL SUMMARY—MARCH.

STATION—NEW ORLEANS.

| Date..... | TEMPERATURE. |      |      | Precipn. in<br>inches and<br>hundredths.. | SUMMARY.                                                 |
|-----------|--------------|------|------|-------------------------------------------|----------------------------------------------------------|
|           | Mean         | Max. | Min. |                                           |                                                          |
| 1         | 65           | 74   | 56   | 0                                         | Mean barometer, 30.026.                                  |
| 2         | 66           | 74   | 58   | 0                                         | Highest barometer, 30.424, 14th.                         |
| 3         | 69           | 76   | 62   | 0                                         | Lowest barometer, 29.673, 7th.                           |
| 4         | 53           | 54   | 52   | 0                                         | Mean temperature, 60.6.                                  |
| 5         | 62           | 74   | 50   | T                                         | Highest temperature, 80, 6th; lowest, 39, 13th.          |
| 6         | 73           | 80   | 66   | .06                                       | Greatest daily range of temperature, 24, 5th.            |
| 7         | 73           | 79   | 67   | T                                         | Least daily range of temperature, 2, 4th.                |
| 8         | 58           | 63   | 53   | T                                         | MEAN TEMPERATURE FOR THIS MONTH IN—                      |
| 9         | 48           | 54   | 42   | 0                                         | 1871.....64.6 1876.....50.5 1881.....59.6 1886.....58.6  |
| 10        | 50           | 55   | 45   | 0                                         | 1872.....58.9 1877.....60.7 1882.....67.9 1887.....62.1  |
| 11        | 52           | 55   | 50   | .66                                       | 1873.....60.2 1878.....66.4 1883.....61.7 1888.....60.3  |
| 12        | 56           | 61   | 52   | T                                         | 1874.....66.3 1879.....64.5 1884.....64.8 1889.....61.0  |
| 13        | 47           | 55   | 39   | 0                                         | 1875.....63.3 1880.....65.5 1885.....58.1 1890.....61.6  |
| 14        | 52           | 57   | 46   | 0                                         | 1891.....60.6                                            |
| 15        | 46           | 51   | 40   | .02                                       | Total deficiency in temp'ture during month, 59.          |
| 16        | 48           | 52   | 45   | .85                                       | Total excess in temp'ture since Jan 1, 37.               |
| 17        | 57           | 65   | 49   | 0                                         | Prevailing direction of wind, N. E.                      |
| 18        | 61           | 70   | 52   | 0                                         | Total movement of wind, 7748 miles.                      |
| 19        | 68           | 77   | 58   | 0                                         | Extreme velocity of wind, direction, and date,           |
| 20        | 64           | 72   | 55   | 0                                         | 41 miles, S., 7th.                                       |
| 21        | 68           | 76   | 59   | 0                                         | Total precipitation, 2.67 inches.                        |
| 22        | 63           | 70   | 56   | 0                                         | Number of days on which .01 inch or more of              |
| 23        | 62           | 68   | 57   | T                                         | precipitation fell, 8.                                   |
| 24        | 66           | 73   | 58   | 0                                         | TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)           |
| 25        | 68           | 75   | 62   | .59                                       | FOR THIS MONTH IN—                                       |
| 26        | 62           | 68   | 57   | .45                                       | 1871.....4.47 1876.....11.32 1881.....2.75 1886.....8.41 |
| 27        | 56           | 66   | 46   | 0                                         | 1872.....9.18 1877.....4.94 1882.....0.92 1887.....3.37  |
| 28        | 63           | 72   | 54   | 0                                         | 1873.....5.10 1878.....4.63 1883.....5.01 1888.....6.45  |
| 29        | 66           | 76   | 56   | 0                                         | 1874.....7.57 1879.....1.36 1884.....8.24 1889.....3.86  |
| 30        | 70           | 74   | 65   | .01                                       | 1875.....10.84 1880.....6.66 1885.....6.99 1890.....1.45 |
| 31        | 68           | 74   | 62   | .03                                       | 1891.....2.67                                            |
|           |              |      |      |                                           | Total deficiency in precip'n during month, 3.01.         |
|           |              |      |      |                                           | Total deficiency in precip'n since Jan. 1, 1.54.         |
|           |              |      |      |                                           | Number of clear days, 11; partly cloudy days,            |
|           |              |      |      |                                           | 9; cloudy days, 11.                                      |
|           |              |      |      |                                           | Dates of Frost, .....                                    |
|           |              |      |      |                                           | Mean maximum temperature, 67.4.                          |
|           |              |      |      |                                           | Mean minimum temperature, 53.8.†                         |

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, Sergeant, Signal Corps Observer.

PUBLISHERS'



DEPARTMENT.

Address all communications to L. GRAHAM & SON, Mgrs. Bus. Dept., 99 to 103 Gravier St., New Orleans.

# The New Orleans Medical and Surgical Journal,

Subscription, Three Dollars per annum, in advance.

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Whole No. 317.

**MAY, 1891.**

VOL. XVIII.  
No. 11.

## INDEX TO ADVERTISEMENTS.

| PAGE.                                                | PAGE.                                          |
|------------------------------------------------------|------------------------------------------------|
| Antikamnia..... 20                                   | Medical Dep't of the Tulane University..... 15 |
| Arlington Chemical Co..... 14                        | Mellins Infants Food..... 1                    |
| Baker's Breakfast Cocoa..... 27                      | Moore McGregor Medication..... 18              |
| Baker & Co., Jno. C..... 20                          | N. Y. Pharmaceutical Co..... 6                 |
| Baltimore Medical College..... 18                    | N. Y. Post-Graduate Medical College..... 22    |
| Battle & Co. J..... 13                               | Peacock's Bromides..... 21                     |
| Bellevue Hospital Medical College..... 27            | Pomeroy Truss Co..... 27                       |
| Boehringer & Soehne..... 10                          | Planten's Capsules..... 15                     |
| Bowden Lithia Springs Co..... 25                     | Robinson-Pettet Co..... 2                      |
| California Fig Syrup..... 11                         | "Sanitas" Antiseptics, etc..... 1              |
| Celerina..... 21                                     | Schieffelin & Co., W. H..... 3                 |
| Cerebro-Spinant—I. O. Woodruff & Co..... 23          | Sharp & Dohme..... 16                          |
| Claudel, Optician..... 18                            | Tarrant & Co..... 17                           |
| Cook, Gus..... 18                                    | Tasteless Quinine..... 15                      |
| Dioiburnia..... 26                                   | The Wm. S. Merrell Chemical Co..... 9          |
| Ford's Digestive Tablets..... 19                     | The R. Hyde Co..... 24                         |
| Health Restorative Co..... 4                         | Wagner Medical Manufacturing Co..... 7         |
| Herrick Uterine Supporter..... 18                    | Wayne's Diuretic Elixir..... 12                |
| Hospital for Women and Children, New Orleans..... 28 | Wheeler's Tissue Phosphates..... 15            |
| Kentucky School of Medicine..... 18                  |                                                |
| Maltine..... 8                                       | COVER.                                         |
| Marchand's Peroxide of Hydrogen..... 32              | Fairchild Bros. & Foster..... 11               |
| Mariani & Co..... 5                                  | Fellows, James I..... 4                        |
| Martin's Vaccine Virus..... 18                       | Reed & Carnrick..... 3                         |
| Mcdermott, A..... 15                                 | Sharp & Dohme—Chemists..... 2                  |

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## PUBLISHERS' NOTES.

I HAVE been using the "Vin Mariani" as a pleasant and very efficient tonic for some time, and recommend it for cases needing the effects of Coca, presented as it is in so agreeable a form.  
NEW ORLEANS.  
SAM'L LOGAN M. D.

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CITY AND COUNTY OF SAN FRANCISCO, CAL. }  
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*Medical Letters may be addressed to:*

Mr. FELLOWS, 48 Vesey St., New York.

NEW SERIES.

VOL. XVIII.

JUNE, 1891.

WHOLE No. 318.

No. 12.

*Paullum sepulta distat inertia  
Celata virtus.*—HORACE

The  
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MEDICAL AND SURGICAL  
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TABLE OF CONTENTS.

|                                                                                                                                                                         | PAGE. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| President's Address.....                                                                                                                                                | 903   |
| Callosities, Abnormalities, and the Rupture<br>of the Parturient Uterus—By Dr. Henry<br>C. Coe, of New York City.....                                                   | 915   |
| Cancer of the Rectum—By L. L. McArthur,<br>M. D., Chicago, Ill.....                                                                                                     | 920   |
| Gynecological and Obstetrical Society of<br>Louisiana.....                                                                                                              | 925   |
| Proceedings of the Twelfth Annual Meet-<br>ing of the Louisiana State Medical<br>Society.....                                                                           | 933   |
| The Results of Total Extirpation of the<br>Uterus for Cancer, as Observed in the<br>Royal Hospital for Women, in Dresden<br>—By Dr. Edward Leisse, First Assistant..... | 941   |
| The Twelfth Annual Meeting of the Louisi-<br>ana State Medical Society.....                                                                                             | 944   |
| Is the Age of Miracles Past?.....                                                                                                                                       | 947   |
| Surgery—On the Coagulation of the Blood<br>in its Practical Aspects.....                                                                                                | 949   |
| Symptoms and Treatment of Intolerable<br>Fissure of the Anus.....                                                                                                       | 959   |
| Operation for Radical Cure of Scrotal<br>Hernia—Tenotomy for Talipes Equinus.....                                                                                       | 961   |

|                                                                                                              | PAGE. |
|--------------------------------------------------------------------------------------------------------------|-------|
| Anomalies of the Female Sexual Organs.....                                                                   | 964   |
| Medicine—The Bacilli of Malaria.....                                                                         | 964   |
| Action of Bile on the Excreting Proper-<br>ties of Pancreatic Juice.....                                     | 965   |
| The Action of Hydrastin upon the Vascular<br>System and the Uterus.....                                      | 966   |
| Contribution to the study of Galvano-Punc-<br>ture in the treatment of Enlarged Ton-<br>sils in Infants..... | 967   |
| Case of Sudden and Unexpected Delivery<br>in the erect posture.....                                          | 967   |
| Putrefied Milk in the Breast.....                                                                            | 968   |
| Book Reviews and Notices.....                                                                                | 970   |
| Necrology.....                                                                                               | 970   |
| Decline of the French.....                                                                                   | 974   |
| Cystitis in Women.....                                                                                       | 975   |
| Novel Treatment of Ingrown Toe Nail.....                                                                     | 975   |
| Resume of Medical Practice Acts in the<br>Different States.....                                              | 975   |
| Yellow Fever in France.....                                                                                  | 978   |
| The Value of a Trade Mark.....                                                                               | 978   |
| Selected Formulæ.....                                                                                        | 979   |
| Mortuary Report—April, 1891.....                                                                             | 981   |
| Meteorological Summary, April, 1891.....                                                                     | 982   |
| Publishers' Department.....                                                                                  | 983   |

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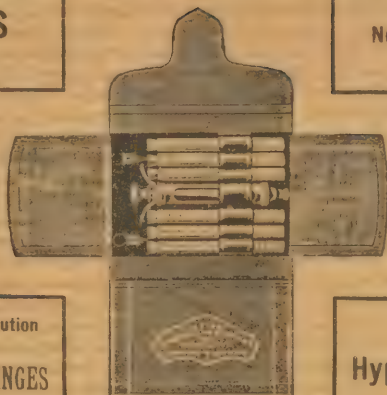


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# NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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VOL. XVIII.

JUNE, 1891.

NO. 12.

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## ORIGINAL ARTICLES.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

### PRESIDENT'S ADDRESS.

*Gentlemen of the Louisiana State Medical Society:*

In performing the time-honored duty of reading an annual address I have been constrained to depart from the general usages on such occasions. Instead of selecting some professional topic and making it the theme of my remarks, I have thought it best to devote the few words prepared for your consideration to the subject of *medical organization*.

I am painfully aware that this topic is already threadbare, and I should have preferred a more congenial subject—one in which the greatness and grandeur of our profession might serve as the theme of my discourse; but when I reflect upon the history of our association for the past few years I am forced to the conviction that no more suitable subject could engage your attention.

Pertinent to this subject, I beg to quote a few lines from an editorial which appeared in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for March, 1891.

“The history of the State Medical Society of Louisiana has been one of struggles against adverse circumstances. The membership (168) is small, when we consider the total number of physicians in the State (over 1000).”

“The evident lack of solidarity is the great fact that strikes any one who studies the state of the professional

body in Louisiana. Any movement tending to the advancement of the medical profession must have the moral support and active coöperation of the best physicians in the State.

“No favorable legislation need be expected when the profession can not make its force felt, and there is no agency better fitted to impress legislators than a strong, well organized body of active, intelligent men. Our physicians do not lack intelligence, and energy is not an infinitesimal quality, but individual efforts directed to obtaining diverse results can never have the weight and value attaching to recommendations emanating from a strong and representative organization.

“Many of the evils under which the profession of the State is now laboring could be remedied if the whole medical corps would move as one man. This can only be done through a State Society, in which grievances could be ventilated and discussed, and plans matured for their correction. In the multitude of counsel safety certainly lies; and any measure receiving the endorsement of a representative State society would be apt to be just what is required to promote the welfare of the profession, and to impress our law makers with the necessity of protecting the rights of one of the most respected callings in life.

“Our State society does not contain on its list of members more than one-fifth of the physicians of the State. Is this encouraging? Can we expect to achieve any results of permanent value when so many of our men stand back and withhold both their moral support and active efforts from movements looking to the advancement of the profession at large? No; it is hardly reasonable to suppose that the active and progressive minority, comprising the enrolled members of the society, can succeed in accomplishing anything in the face of the supineness of the indifferent majority.

“Last year, when our meeting was declared off, Dr. Owens, the President of the Society, tried to compensate for the failure to meet by appointing a committee charged with the duty of drawing up a bill regulating ‘Medical practice in Louisiana.’



“ The result of the committee's labors was presented to the legislature at its last session.

“ It will be remembered that the bill passed the House, but it was defeated in the Senate.

“ The defeat was caused by the opposition of the homœopaths, the indifference of the majority of the regular physicians of the State, but above all, by an influence totally unexpected, and which could not therefore be overcome in time to prevent in the hurry incident to the closing days of the legislative session the indefinite postponement of the bill.

“ This influence, we are compelled to tell the members of the society, came from its own body, and we believe was the main factor in accomplishing the defeat of the bill.

“ On this subject, we have before expressed ourselves so emphatically that we feel it would be unnecessary to say more now.”

The honor conferred upon me by the suffrages of the members of the Louisiana State Medical Association, in elevating me to the presidency of so distinguished a body of learned gentlemen, renders me not a little sensitive concerning the stewardship I have exercised during the period of my incumbency.

It is with the purpose of rendering an account of such stewardship that I am compelled further to tax your patience with a relation of some of the eventful incidents comprised within the last two years.

I beg to refer to such portions of a letter written by me to the editors of *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*, published in the April issue, dated Eola, La., March 4, 1891.

“ It is needless to acquaint the members of the society with the reasons governing the association in selecting Baton Rouge as the place of meeting last year.

“ They were simply to present a bill to the General Assembly to regulate the practice of medicine in this State, and to bring to bear the influence of our society to compass this end.

“ In spite of the high water which prevented the meeting from being held at Baton Rouge, an effort was made to carry

out the views of the members by the appointment of an auxiliary committee on State Medicine and Legislation, of which Dr. A. B. Miles was chairman. This committee did prepare a bill, liberal in character, which bill was duly presented to the House, where it passed; but in the Senate it failed to meet with that sanction which would have secured to Louisiana some protection from the hands of incompetent and illy qualified physicians, who can still find in this State a field for the exercise of ignorant charlatanism.

“There being no necessity to meet at Baton Rouge this year (1891), as the evident intention of the society in selecting Baton Rouge last year (1890) was on account of the desire to influence the General Assembly to pass such laws concerning the practice of medicine as would put our State on an equality with such States as Alabama, Virginia, Minnesota and many other States; and, such intention being no longer possible to accomplish in the year 1891, by reason that the Legislature will not convene this year, I addressed letters to members of the society in different parts of the State (twelve letters in all), respectfully asking each member to whom I wrote to express his opinion concerning the time and place of our next meeting.

“I did not address a single letter to any member residing either at New Orleans or Baton Rouge, for the simple reason that I conceived that those members living in these respective places would naturally be biased in favor of having the meeting held in their own town.

“It is true in my letters of inquiry I did suggest that, to me, New Orleans seemed the more suitable place, and for the date, I preferred Wednesday, May 13, 1891, in order to permit the Attakapas association to hold its meeting first, which meeting of the Attakapas Medical Association will be held Tuesday, May 5. To my letters of inquiry I have received about half a dozen replies. These replies expressed the opinion that New Orleans would be the most suitable place for our next meeting, and that the second Wednesday in May would be a very suitable time to hold the meeting of the State Society. To my other letters I have received no replies at all.”

Since the date of publication of the above letter, the unanswered letters have been courteously replied to, and in every instance the advice was given to hold the meeting at New Orleans.

To the members of the Shreveport Medical Society I feel under special obligations for the official character of the letter of reply concerning the time and place of meeting. These gentlemen, at a meeting of the local society at Shreveport, took under advisement the letter soliciting their opinion and notified me through the recording secretary of their society. This letter, concurring in the opinion that New Orleans was the proper place for this meeting of our State association, is now in the possession of the secretary of the Louisiana State Medical Society, Dr. P. B. McCutcheon.

At the risk of being tiresome I beg to quote further from my letter of March 4, and I am the more persuaded of receiving your kind indulgence in so doing, because it is necessary that those members who are not subscribers to the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*, and who may not have been informed of the reasons for selecting New Orleans as the place of meeting, may have this opportunity of receiving full explanation.

“However disagreeable a task, I must, nevertheless, confess with the most poignant regret that there appears to be a want of interest manifested by the members of the State society to such an extent that I beg respectfully to call the serious attention of our members to this deplorable want of interest in an organization which should be fostered by every motive that can appeal to our pride as citizens of a great commonwealth, and as respectable members of so honorable a profession as that of medicine.

“It has been the painful duty of Dr. R. H. Day, a former president of the Louisiana State Medical Society, to call the attention of the members of the association to this very subject, and by the most urgent appeals to endeavor to stimulate that “*esprit de corps*” which should characterize every organization or association of gentlemen linked together by a membership having for its object the enlightenment of their minds by that attrition created by an interchange of ideas on



such leading topics relating to medicine, surgery, hygiene and other allied subjects; yet the results of such appeals appear short-lived and attended with little improvement in infusing life and vigor into our association.

“It is only by organization, persistently maintained, and a sacrifice of personal and selfish motives that we can expect to reach such a standard of excellence as a medical society as would place us in the front ranks with those of other States, membership in which confers a badge of distinction.”

To quote again from the editorial in the March number of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*: “Last year the unusually high water in the rivers washed away some of our levees and caused great disaster; travel was interrupted, and the losses incurred by our lay fellow-citizens made themselves felt in the financial affairs of the medical profession. These floods happened near the time set down for our meeting, but this had to be postponed indefinitely, subject to the call of the president.”

Appreciating the gravity of the situation, our ever active, zealous secretary, Dr. P. B. McCutcheon, wrote to me explaining the embarrassment caused by the overflow in preventing our meeting in Baton Rouge. Isolated in about the center of the State, and remote from the residence of any respectable numbers of our fellows whose counsel I could seek in such exigency, I thought it best to repair in person to New Orleans, in order to discuss the situation with our worthy secretary and such members of the association in whose wisdom I could confide to direct me in the trying ordeal in which I found the society involved by reason of an unprecedented overflow.

Two visits made to New Orleans in order to devise, with the advice and assistance of my confreres, such measures as would accomplish the wishes of the society in regard to medical legislation should be a sufficient testimony of my earnest zeal to fulfil the duties of my station.

Upon these visits to New Orleans the earnest and courteous manner in which the members of the Orleans Medical Society so cordially extended to me their inestimable advice and assistance will ever be a source of grateful remembrance “*Hæc olim meminisse juvabit.*”

With the valued counsel and aid of these gentlemen, as already explained, an auxiliary committee on State medicine and legislation was appointed, with Dr. A. B. Miles as chairman. You are sufficiently familiar, gentlemen, with the results of the labors of this committee. A bill was framed liberal in its provisions, and, under the personal supervision of members of this committee, was presented to the General Assembly, where it passed the House. You have been informed in no uncertain or ambiguous terms by the editors of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* that to the influence of a certain member of our own fellows is to be accredited the defeat of this bill before the Senate. This charge is of so serious a nature that I forbear comment. I desire merely to direct your attention to a charge of so serious a character, leaving to your wisdom the expediency of further action. I can only express the hope that such accusation may prove an unintentional error; but should investigation deprive us of so devout a wish, we can only exclaim: "*Tantæne animis cœlestibus iræ.*"

It would prolong the length of my address beyond the bounds of your patient hearing to explain more fully the labors of the committee on State medicine and legislation. Suffice to say that the prominent social and professional position occupied by these gentlemen is an adequate pledge of their fitness for the important duties assigned them.

Among the objects of the organization is the advantages of instruction derived from the reading of scientific and practical essays. The care and research necessary to prepare such essays creditably, give healthful exercise to the intellects of the readers, while to the auditors the instruction afforded by participation in our sessions is of incalculable advantage.

To all is not given the divine afflatus of genius, that God-like quality of mind which, soaring above the common sphere of ordinary minds, holds familiar intercourse with the hidden secrets of nature and renders as familiar as household words the mysteries of creation! To few, however, is denied the privilege of a participation in the grand lessons taught by the labors of the man of genius, or the patient scientist! It is to that patient discipline of the mind necessary to develop the

highest order of intellectual force that the world is indebted for its greatest men.

Gilbert Hamburton, in an essay on the moral basis of the intellectual life, says: "Whether a boy happens to be a dunce at school or youth of brilliant promise, his future intellectual career will depend very much on his moral force.

"The distinguished men who have derived so little benefit from early discipline have invariably subjected themselves to a discipline of another kind, which prepared them for the labor of their manhood.

"It may be a pure assumption to say this, but the assumption is confirmed by every instance that is known to me. Many eminent men have undergone the discipline of business. Many, like Franklin, have been self-disciplined, but I have never heard of a person who had risen to intellectual eminence without voluntary discipline of some kind."

Your own reading of the biography of the great men whose names adorn the pages of history in our own and other countries confirms this assertion.

Discipline, patience, work is the mystic tripod upon which the greatness of human character has been evolved.

In well organized medical societies, both local, state and national, is offered an excellent field for the exercise of those qualities which go to constitute greatness. Here in an assembly of the intellectual co-laborers in the domains of science, we can all of us bring our offerings to the shrine of Hygeia. If we can not all officiate as high priests, the office of an acolyte will not be despised.

If among the objects of medical organization the benefit derived from the preparation, reading, and discussions of essays are to be considered of importance, no less important, it seems to me, is the power we possess, and should exercise by well directed efforts, to oppose every legitimate barrier to the yearly accessions to the ranks of our already overcrowded profession of so many graduates in medicine whose early educational advantages by no means have prepared them to enter upon so difficult a study as that of medicine—a study embracing so many branches and so intimately connected with nearly every branch of human learning.



Here we should enter our solemn protest. If our most persistent efforts fail to influence the practical good sense of our legislators to pass laws, requiring at least a respectable standard of education in physicians practising in this State, at least, we have a remedy at our command in the moral influence we can, to a certain degree, exercise over such medical institutions as permit incompetent men to matriculate. Our voice should be heard on this vital question, and in no uncertain tone.

If the medical colleges continue to graduate incompetent men we should refuse professional association with such as we believe to be unfit to pursue so responsible a calling.

It is monstrous presumption to ask for legislative aid in extirpating ignorance from the ranks of the profession, when the sordid propensities of scholarly professors in many of our medical colleges yearly confer diplomas upon men whose education would not fit them to occupy any but the most subordinate positions in life.

It is the country districts and parishes which receive this yearly accession to our ranks.

Is it in the natural fitness of things to have one kind of doctors for the city, a polished, educated gentleman—and for the country an ignoramus, as devoid of good breeding as of brains?

We have an Augean stable that sadly needs cleaning! Let us turn on the full stream of our indignant protest and not wait for a Hercules to do our dirty work.

Between the extremes of erudition and ignorance in the medical profession, there is a respectable class of gentlemen, in Louisiana, as elsewhere in our country, who occupy a medium position—gentlemen of refinement, possessed of fair attainments, whose educational advantages, if not of the first order, had been at least sufficiently thorough to qualify them for pursuing the study of medicine with profit to themselves and advantage to the community in which they have settled—a class of highly meritorious, honorable, studious men, an honor to our ranks and noble workers in the cause of suffering humanity.

All honor to these men! But for the "*Hoi Polloi*" who

hang on the skirts of the profession, there can be but one sentiment entertained—that of supreme contempt.

At a time when every branch of science is making giant strides in progress—when the world is almost daily surprised by new inventions for the use, comfort and happiness of man, does it not seem a little strange that the health and lives of a community should be intrusted to incompetent men, many of whom, having failed in various pursuits requiring only application or industry, have taken up the study of medicine as a dernier resort, expecting to find a sort of Fortunatus bag that will empty its treasures into their outstretched hands.

The workshop has been abandoned; the plow left resting in the furrow; the grocery closed, to make poor doctors out of men with neither intelligence nor industry enough to succeed in a mere mechanical pursuit. To accomplish a more elevated standard of medical education in Louisiana: to influence the legislature to recognize the sacredness of the office of the true physician, by the passage of such laws as will effectually prevent the venal and ignorant pretender from practising in this State from whatever school he may have obtained his diploma, will require on our part thorough organization in State and parish societies.

I would respectfully suggest for your serious consideration the following recommendations:

1. That the greatest care be exercised in the election of new members to the State society. While it is our desire to invite association with the State organization of all respectable physicians in the State, in the hurried manner in which, often, the names of candidates for membership are elected at the same meeting, little opportunity is given to inquire into the moral and intellectual character of the candidate. I would therefore recommend the appointment of a committee on credentials, to whom should be referred the name of each candidate, with the place of residence of such applicant for membership, and that it shall be the duty of such committee to investigate the professional and moral status of each candidate, and report the result of such investigation to the association at the meeting following the presentation of the name of the applicant.

2. That a departure from this rule can be made only in cases where no reasonable doubt whatever can be entertained concerning the character of a candidate for membership.

By the operation of such a rule of conduct governing the election of new members, a wholesome censorship can be exercised to exclude unworthy members.

While the Louisiana State Medical Society needs the membership of every respectable physician in the State we could certainly derive no benefit from an association with incompetent men.

3. That for the more efficient working of our transactions, the association shall establish sections.

As you are aware, the subject of Otology is at present included in the Section on Ophthalmology—and we have no Section on Laryngology and Rhinology—equally important branches. For self-evident reasons I recommend that Otology be detached from the Section on Ophthalmology, and that a new section of Otology, Laryngology and Rhinology be created.

That there be a thorough organization of the various parish societies, who shall, besides a permanent membership with the State society, by application, yearly select their most eligible men, who shall be sent as delegates to the State association.

That these delegates be elected by the various parish societies and their names, with the section they propose to represent, be reported by the secretaries of the different parish societies to the secretary of the State association.

Permit me in closing to quote the concluding part of Professor T. Gailliard Thomas' recent address at the commencement exercises of "Long Island College Hospital:"

"The motto of the New York Academy of Medicine, coming down from mythological times, is this: '*Homines deos accedunt hominibus dando salutem*,'—'Men mostly resemble gods when they afford health to their fellow-men.' The reward of the physician whose happy discovery stamps out a disease which before his day slew its thousands, comes from the hand of no emperor; his glory from the appreciation



of no applauding multitude; his renown from the pen of no fulsome historian.

“For him the victor’s crown comes from the hand of the immortal God; his glory, from the satisfaction of doing a great and glorious work: his renown, from the gratitude of his fellow-men.

“The ‘great awakening light,’ which bless the eyes of Abou Ben Adhem, not the imperial purple which decked the shoulders of the mighty Julius, constitutes his diadem and causes a halo to shine around his head. In the golden days of chivalry, when a young knight was to receive the accolade and become the defender of the weak and the redresser of wrong, he was required to spend an entire night in a cathedral or other solemn place reflecting upon the purity, the beneficence and the grandeur of his new office, and in forming the noble resolve to make it no trade, but to administer his duties with the love of man in his heart and the glory of God in his soul.

“Let this night and these exercises bear to you the relation of that vigil night of old! Medicine is the noblest of professions, the meanest of trades. Unless you can live lives of purity, of virtue, of honor and of honesty, seek a livelihood elsewhere, and insult not the gods by striving through base methods and ignoble ambitions to resemble them! Will you not now fully agree with me when, in closing this address, I ask you whether the possibilities of medicine are not really greater than those of her sister sciences and arts? Will you not accord in my postulate that arms, arts, literature, science, all have their rewards, but that not one of them surpasses in the magnificence of its gifts those of which the godlike science, medicine, is capable.”

Thanking you, gentlemen, for the honor in having elevated me to the distinguished position of President of the Louisiana State Medical Society, I shall never cease to regard it as the greatest honor of my life.

COELIOTOMY (ABDOMINAL SECTION) FOR RUPTURE OF  
THE PARTURIENT UTERUS.

BY DR. HENRY C. COE, OF NEW YORK CITY.

[Read before the Surgical Section of the American Medical Association, May 7, 1891.]

•  
INTRODUCTION.

Although the literature of this subject is quite exhaustive, most authors deal with the etiology and pathology of rupture of the uterus, rather than with the treatment; and much of the teaching with regard to the latter antedates the era of modern abdominal surgery. The writer feels some hesitation in writing upon this theme, as it has been already ably presented to the American Medical Association by Dr. Wm. H. Wathen and Dr. C. A. L. Reed, in papers read before the Obstetrical Section. The writer's purpose in re-introducing the subject before the Surgical Section is to have it discussed from the broad standpoint of *general surgery*. This is entirely proper, since rupture of the uterus is to be considered in the same light as rupture or other lesions of any other of the abdominal viscera. It is preëminently a *surgical emergency*, and should not be studied from its gynecological or obstetrical side alone.

When Lawson Tait feels justified in proposing Porro's operation as the proper treatment for placenta prævia, we may ask: "Is simple expectant treatment applicable to the far more formidable obstetrical complication, rupture of the uterus? Note that the paper deals with rupture of the *parturient* uterus, and not with injuries of the organ before labor. This is an important distinction to be borne in mind in the discussion. The writer bases his paper entirely upon his personal experience, that of four cases (seen within a period of eighteen months) in which abdominal section was performed. One case was successful, the patient being now in perfect health.

## BRIEF OUTLINE OF THE CASES.

CASE I. (Reported *in extenso* in *New York Medical Record*.) Rupture due to undue interference in the first stage (forceps and attempted version), the child being of unusual size. Operation two hours after the accident, the patient being in collapse from active internal hemorrhage.

The child's head had escaped from the rent, which extended from the cervix through the left broad ligament, half way to the fundus. Child extracted through the rent, after application of rubber cord. Uterus removed and pedicle treated by the extra-peritoneal method; on account of extensive laceration the entire stump sloughed out, but the patient made a good recovery.

CASE II. Cause of lesion identical with that in Case I. Injury not recognized until twenty-four hours after the birth of the child, when the patient was already septic. Cœliotomy. Transverse tear on posterior aspect four inches long, in lower segment, with commencing peritonitis. Rent sutured and thorough irrigation and drainage. Death from shock twelve hours later.

CASE III. Moderate contraction of anterior conjugate, with large child. High forceps unsuccessful. Delivery after difficult version. In removing an adherent placenta the accoucheur withdrew a coil of small intestine, which prolapsed through a rent in the posterior wall of the uterus. It was replaced (as was supposed) and the opening was plugged with iodoform gauze. Abdominal section was then regarded as unjustifiable on account of profound collapse. The writer saw the patient eighteen hours later, found her in fair condition, the upper portion of the vagina being filled with intestine. He proposed and performed cœliotomy at once. There was a transverse tear posteriorly in the lower segment extending from between the bases of the broad ligaments. It was too extensive to suture, so both broad ligaments were clamped and the uterus was extirpated in toto in five minutes. It was found that the intestine had not been replaced, but had been nipped in the edges of the rent, so that at least three feet were black and gangrenous. Irrigation and gauze drainage *per vaginam*. Death from shock ten hours later. (The above were private cases.)

CASE IV. (Maternity Hospital.) Spontaneous rupture during normal labor, not recognized. Collapse five hours later, but no external hemorrhage. The writer saw the patient twelve hours after the accident and diagnosed rupture of the uterus with internal bleeding. A consultation



of the attending staff was held and the unanimous opinion was that there was an extensive laceration into the left broad ligament, and that active hemorrhage was in progress, which it was necessary to arrest. There was doubt as to whether the rent extended into the peritoneal cavity or not. Exploration advised. This was conducted rapidly. No blood found in the abdominal or pelvic cavity. There was an immense hæmatoma of the left broad ligament, extending upward into the corresponding iliac fossa. Abdominal wound closed and vagina tamponed with gauze, although *there had not been any external hemorrhage whatever.*

Many cases of spontaneous rupture are doubtless unrecognized by the general practitioner. Profound shock after delivery should always awaken suspicion, even if there is only moderate external hemorrhage, and a thorough examination should be made. Text-books give rules for recognizing rupture only *during* parturition.

The rules laid down for the treatment of rupture are uncertain and confusing. The tendency of the practitioner is toward purely expectant treatment. He would pack the vagina with gauze and wait. This course is too often fatal. The emergency is a *surgical* one and is to be treated according to the ordinary rules of surgery. The fact that successful cases of cœliotomy for rupture of the parturient uterus are comparatively rare is no more an argument against the operation than if it were applied to gun-shot wounds of the abdominal viscera.

In analyzing the unsuccessful cases it will generally be found that the operative interference came *too late*, *i. e.*, from eight to eighteen hours after rupture. The writer's successful case was as unfavorable as could be imagined, but the patient was operated upon promptly, as soon as the lesion was discovered. Two methods of active treatment are now recognized and practised, viz :

1. Drainage *per vaginam.*

2. Abdominal section, followed by either (*a*) drainage, (*b*) suture of the tear, or (*c*) amputation of the uterus. Simple drainage has some powerful supporters (mainly in the Vienna school) and the statistics are apparently convincing, but it is

not capable of general application to all cases and the indications are not always clear, because without opening the abdomen it is frequently impossible to determine the following important points:

1. The nature and extent of the tear.
2. The presence of active hemorrhage.
3. The presence of blood and amniotic fluid in the peritoneal cavity. (It is assumed that the uterus has been amputated.)

The writer thinks that abdominal section is indicated under the following conditions:

1. Before the uterus is emptied.

(a) When the placenta or any portion of the fœtus has escaped through the rent. Attempts at manual delivery only increase existing shock and destroy the patient's chances after section, as invariably shown by records of unsuccessful cases.

(b) Where there is evidence of progressive internal hemorrhage.

2. After the uterus is emptied.

(a) When there is an extensive prolapse of the gut through the tear (as in Case III).

(b) In all complete lacerations (especially in those involving the broad ligaments) except small tears low down near the vaginal fornix (as in Case II), where good drainage can be maintained.

(c) In incomplete tears in which the broad ligament is extensively involved (as in Case IV) and there is evidence of progressive hemorrhage. This point must remain *sub judice*. Only one other besides the writer (Peters) has opened the abdomen in such a case. His patient died and the report of the case provoked considerable adverse criticism. In the discussion before the Vienna Obstetrical Society only Gustave Braun expressed the opinion that section was justifiable when there was evidence of progressive internal bleeding, and it was not certain whether the tear was complete or not.

Parvin's summary is a comprehensive one, viz:

"Probably the solution of the question is this, that where the tear is in such a position that vaginal drainage is perfect

the abdomen need not be opened; but if such drainage is impossible or imperfect, then section is indicated.”

What shall we do after opening the abdomen?

1. Arrest hemorrhage either with forceps or the temporary rubber ligature.

2. If the tear is small (two inches) and is low down in Douglas' pouch drainage *per vaginam* may be indicated.

3. If the tear is clean cut, without contusion of the edges and does not involve cervix or broad ligaments, it may be closed with deep and sero-serous sutures.

4. If the tear is not low down, is extensive, with contusion of the edges, and especially if a portion of the fœtus protrudes, amputation of the uterus with extra-peritoneal treatment of the stump is indicated. The child can be abstracted through the rent before the removal of the uterus (Prevot) or afterward (Porro).

5. In extensive transverse tears in the lower segment (as in case *c*) and in tears beginning in the cervix and extending upward through the broad ligament, the writer would strongly urge the propriety of total extirpation of the uterus as the operation *par excellence* (as it is in many cases of hysteromyomectomy) for the following reasons:

(*a*) It requires less time than Porro's operation, and is quite as easy, especially if the patient is placed in Trendelenburg's posture. There should be no great shock or loss of blood.

(*b*) All the contused tissue is removed, which if left behind in the stump will invariably slough and imperil the life of the patient (as in Case I).

(*c*) Drainage is perfect. After thorough irrigation and toilet of the peritoneal cavity it can be closed, drainage being maintained *per vaginam* with iodoform gauze, as after vaginal hysterectomy.

#### CONCLUSION.

The writer deprecates any intention of recommending a heroic method of treatment to the entire exclusion of the more conservative. He is an avowed conservative in abdominal surgery, but believes that rupture of the parturient uterus is a



desperate emergency, in which a fatal termination is the rule, and that it requires prompt and energetic treatment according to the rules of modern surgery. The fact that the statistics of cœliotomy in those cases have shown a large mortality is not an argument against the operation. In every case the accoucheur, if not himself a surgeon, should, without an instant's delay, summon experienced counsel and explain to the family that immediate resort to abdominal section may be necessary. Only by prompt interference can we improve statistics and thus elevate the operation above the level of a hopeless and apparently unnecessary surgical experiment.

## PROCEEDINGS OF SOCIETIES.

### CANCER OF THE RECTUM.\*

By L. L. McARTHUR, M. D., Chicago, Ill.

In my brief experience as a surgeon it has been my fortune to number among my cases six examples of this disease in various stages of advancement, as follows: one, female, cancer within two inches of anus, colostomy and excision; one, female, cancer involving anus and lower rectum, colostomy, excision; one, female, cancer involving anus and rectum, colostomy, no excision; one, female, cancer high in rectum, no colostomy, curettage; one, male, Kraske's operation, colostomy (Dr. Fenger's case); one, male, no excision, curettage, no colostomy. With these there were no deaths as a result of the operations, though Kelsey states that the mortality for excision is 33 per cent.

Let me, before presenting the history of a case, call to your attention the following significant facts: In a careful inquiry—made by Cripps—into the family history of a large number of cases of cancer, the percentage of mortality by that disease was found almost identical with that of the general population by the same. In a very large proportion the disease is so situated that an infection could have been plausibly possible. Infection of husband from wife suffering from cancer of cervix has been in several instances well authenticated by competent observers. A much greater fre-

\*Read before the Chicago Gynecological Society January, 16, 1891.

quency exists near the sea than inland, and both Sheurlen, of Munich, and Thoma, of Heidelberg, have demonstrated the frequent presence of micro-organisms (psorosperms), which, in their opinion have a specific relation to the causation of this disease.

In relative frequency of type, cylindrical-celled, flat-celled (epithelioma), and papillo-carcinoma stand in order named. Allingham, who in 1886 had already reported thirty-nine cases of excision, is authority for the statement that rectal carcinoma usually runs its course in twenty-four months. He notes, however, cases ending in death in from four months to four years. His experience had been also (contrary to that usually noted) that the disease occurs more frequently in males than in females, and that its most usual site is within three inches of the anus. Cachexia appears at a very early period. The ages of greatest frequency range from 45 to 55, though it has been noted as early as the age of 6. Cancer in this location frequently escapes the observation of the general practitioner, being mistaken for hemorrhoids; and, for this reason, too great care can not be taken in the examination of middle-aged people in whom there are symptoms referable to the rectum.

#### TREATMENT.

James Adams urges that in every case there should be made a colostomy, saying: "In cases of any but the slightest degree the operation of removal may prove incomplete and the disease speedily return: \* \* \* after complete extirpation of the lower end of the rectum the subsequent contraction is often very great, and even at times intractable, and in any case the healing of the wound will be much expedited and the chances of local recurrence diminished by diverting the course of the fecal matter."

Allingham justly condemns the making of a colostomy in every case of cancer of the rectum, stating that "often neither pain nor obstruction will ensue in months, or they may never occur, and the patient may die from some other malady. Of course if a surgeon at once persuades all his patients who have malignant growths in their rectum to submit to colostomy under the promise that life will be prolonged or suffering averted, he will have many cases to report and very good but very valueless statistics."

There are four factors which make this operation justifiable: First, because the mortality of rectal excision can be immensely reduced by diverting the fecal matter from the site of the excision. Second, because there are in some of the cases excruciating pains, caused by the passage of fecal matter over the ulcerating carcinoma, which can be relieved

by a colostomy, winning at the same time for the surgeon the gratitude of the patient. Third, because in those cases in which the disease extends higher than the lower three inches, there is sure to be sooner or later a stenosis. This Jessop demonstrated at the late meeting of the British Medical Association. He calls attention to the fact that where the disease is low down in the rectum complete obstruction seldom occurs, and that the opposite is true where the disease is high up. The reasons for this difference are to be found in the anatomy of the parts themselves; for while the rectum, as it approaches the outlet, becomes more closely applied to the sacrum and pelvic wall, in its superior portion it is comparatively free. Thus the contractile action of the colon is exerted with effect in forcing its contents through the contracted ring when that ring is fixed and immovable. But when the narrow portion is freely movable, as it is when situated in the upper portion of the rectum, the efforts of the bowel above succeed only in invaginating or otherwise displacing the growth, and fail altogether to effect any onward movement of the contents (Kelsey). Fourthly, it has been the experience of most operators that the cicatricial contraction which follows such an operation is often excessive and intractable, as in any of the inflammations, specific or simple, which so frequently result in a stenosis here. Allingham has found that if he would maintain the gut in a useful and patulous condition, it is necessary to have the patient wear a gutta-percha tube, which can be removed at will. Finally, an argument which needs no champion is the fact that 33 per cent. of all the cases of carcinoma (as shown by the researches of Jessop in 102 cases which were allowed to follow their course without any surgical interference) die from obstruction.

To sum up, I would urge that *prior to every excision in every painful case*, and in every case where the disease was situated *high up*, that a colostomy be made, the choice being in favor of the left inguinal. The method of excision recommended by the French surgeons has been that which I have utilized, preceding each excision, however, by a colostomy two or three weeks prior to the final operation. In this the main feature is a deep incision which exposes the posterior segment of the rectum from the anus to the coccyx, when it is an easy matter to dissect out the rectal tube until one comes to the anterior portion. Here, if it is found that the disease involves one or more of the coats of the vaginal wall it is, in my opinion, best to remove a longitudinal segment of the entire thickness of the same, as it both renders the operation safer and more easily accomplished, and does not, as Kelsey would



infer, greatly increase the danger. When the sphincters are involved a circular incision should surround the anal opening, and all be removed together. Dr. Guerin's suggestion that the gut be cut through by the ecraseur, modified by the passing through the normal gut of several threads for purposes of fixation of the proximal end after removal, as recommended by Verneuil, has been the procedure employed in the excisions I have made. The proximal end is then to be stitched to the posterior angle of the perineal incision or to the left side of the coccyx, and, after stitching up the vaginal wound in much the same way, as after a posterior colporrhaphy or laceration, deep transverse perineal stitches render the making of a new and extensive perineal body very easy.

When the type of the disease is that of the cauliflower-like growth known as papillo-carcinoma, I believe the best practice is to remove it with the curette rapidly and well down to the base of the growth. The hemorrhage, very active and easily provoked while in the soft tissues of the tumor, is easily controlled when the base has been reached. In two such cases I have been successful in for a time relieving them of their distressing symptoms, but have not been able to follow their history for more than six months after operation.

The case I now report is of interest in showing the benefit to be derived from surgical interference.

#### CASE.

After having suffered with what she believed to be hemorrhage, the patient came to St. Luke's Hospital a year and a half ago, with symptoms of absolute stenosis of the intestine, and requiring immediate relief. The diagnosis of carcinomatous obstruction of the rectum being made, a colostomy in the left lumbar region was done, with relief to the urgent symptoms. After the lapse of three weeks, the artificial anus being well established and healed, an incision of the rectum was practised after the usual methods by a deep posterior incision from the anus to the left side of the coccyx well down to the posterior wall of the rectum, which was then dissected laterally until the vaginal wall was reached, which was found to be involved to the level of the posterior lip of the cervix in the carcinomatous growth. The posterior wall of the vagina was removed, as well as the rectum, to this level, including the sphincter muscles. The rectum was stitched to the skin of the left side of the coccyx, and deep transverse stitches were inserted to make a new perineal body. There was speedy union and rapid convalescence. After the lapse of one year she returned to me with the artificial anus pre-

senting a normal rectal mucous membrane normally attached to the integument to the left side of the tip of the coccyx, with the artificial anus almost closed from surgical interference by Dr. John E. Owens, but with a return in the perirectal tissue of the original trouble to such an extent that the line of cicatrix in the vaginal wall posteriorly, and in the anterior rectal wall was again invaded by the new growth, which was beginning to cause painful defecation as at first.

The patient, being much frightened with the symptoms of a return, came to me requesting a repetition of the operation. This at first I refused to make, telling her that I did not believe her longevity could be increased by such a procedure nor her condition materially improved. She then consulted Drs. Parkes and Fenger, both of whom, she stated, promised to operate upon her and offered her hopes of at least temporary relief. Coming back to me with this history and the threat that if I would not operate somebody else would, I had her admitted in the last week of September, 1890, to the Michael Reese Hospital, where I excised the portion of the rectum which had been drawn down and attached to the integument, at a point on a level with the posterior lip of the cervix. I dissected out laterally, in so far as I could reach, all indurated tissue. I then found that it was impossible to bring the end of the rectum down to the integument, no matter how far I might extend my posterior incision, and decided that the best thing I could do would be to suture the end of the rectum at the top of the vaginal incision after the cicatrix had been removed. I did this, then united the vaginal mucous membrane, much as is done for a laceration or operation for posterior colporrhaphy, and brought the lateral pelvic tissues together by very deep, heavy silk sutures, and, strangely enough, obtained a perfect union.

The patient has, since the second week in November, been at home, is feeling well, has gained in weight, and has several times come to my office, each time stating that she feels better than she did during the year which elapsed after the first operation, that she now has control of the bowel and is capable of evacuating its contents without any artificial assistance—that is, without a douche, which I advised when she first left the hospital.

I believe this to be a unique case. I do not find, in what literature I possess, reference to a similar operation. I have no doubt that she will have a return of the trouble, because the cicatricial contraction which normally occurs with any inflammatory deposit about the rectum, whether from specific or simple inflammations, has already produced some suspicious induration.

## GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

## MARCH MEETING.

The president, Dr. Henry M. Wilson, in the chair.

Dr. Howard A. Kelly read a paper upon the technique of the cesarean section, described in a series of steps, from the selection of the case down to the after treatment. The relative and absolute indications were described. The Porro operation was rejected, excepting under special peculiar circumstances: for example, when there was good reason to suspect septic infection, as after prolonged efforts at delivery, at turning, or the use of the forceps, also in cases of large tumors occupying the body of the uterus, or in some cases of cancer, or in uncontrollable hemorrhage from the placental site. Thus limited, the conservative operation and the Porro operation are mutually exclusive, not occupying the same field.

It is a serious surgical error to mutilate a woman by performing the Porro operation where special indications do not exist.

The mortality of the Porro operation is fully as great and probably greater than that of the conservative.

In a healthy case, free from sepsis, with unruptured membranes, it is not necessary to deliver the uterus from the abdomen before incising it and delivering the child. It is rarely necessary to use any constricting ligature around the cervical end of the uterus. Excessive hemorrhage from the placental site or the margin of the wound can very well be temporarily controlled by constricting the cervix with the hands of an assistant.

The uterine suture consists of deep sutures, embracing the peritoneum and muscularis, but not the decidua; about ten such sutures are needed. Between each of these deep sutures, half deep sutures can be passed, securing perfect coaptation of the peritoneal surfaces. The sero-serous sutures are not necessary in cases free from any suspicion of infection. In such clean cases, the uterus is dropped back into the abdomen and covered with the omentum. If there exist a slight suspicion, it is of advantage to draw the omentum down behind the uterus, thus favoring the discharge of any septic material through the lower angle of the wound.

Drainage of the pelvic cavity can not be efficiently carried out. The abdominal wound must be concealed by a dressing made of snowy cotton dissolved in alcohol or ether, containing one part bichloride to 16,000. A little strip of gauze is laid over the wound saturated with this solution. This adheres until it is time to take the suture out, concealing the wound, and



preventing contamination from the outside much better than many layers of gauze and cotton. The baby should be allowed to nurse as soon as the mother has thoroughly recovered from the anæsthetic.

The vagina should not be douched out as a matter of routine. The vaginal outlet should be secured from the introduction of sepsis from without by recorating the labia and throwing into the vulva orifice a drachm of powdered iodoform and boric acid (1 to 7). A cotton pad loosely applied to the vulvus should be changed as often as soiled by the discharge.

The patient thus passes through perfectly normal puerperium.

Dr. Chas. P. Noble: In the technique of the operation laid down by Dr. Kelly, reference has been made to typical cases. In such cases I agree entirely with what he has said. But all cases are not typical.

I will report a unique case upon which I did the cæsarean section recently.

Dr. Kelly had operated in a previous pregnancy. As a result of the first operation there remained a fistula opening from the uterine cavity through the abdominal wall. Notwithstanding this fistula she became pregnant, and for several weeks the amniotic bag protruded into the opening, so that there was nothing between the fœtus and the outer world but the thin amniotic sac.

This sac ruptured at the thirty-third week. The woman had a generally contracted pelvis; besides having a large mass of scar-tissue behind the cervix, left from her previous cæsarean labor. Had spontaneous labor been possible, the fœtus would have escaped through the fistula and not *per vaginam*. In view of the conditions I thought cæsarean section preferable to delivering the mutilated fœtus *per vias naturales*.

The finger was inserted into the uterus through the fistula, and with this as a guide the incision was made through the utero-abdominal region.

Sufficient room not being afforded for delivery the peritoneal cavity was opened and the uterine incision lengthened. The living fœtus was then delivered.

The placenta and membranes were firmly adhered and were slowly peeled off. To control bleeding during this time it was necessary to insert the uterus through the abdominal incision to enable the assistant to grasp the lower segment.

The patient passed through a perfectly normal puerperium and is now quite well, and soundly healed.

This case is entirely unique in its conditions, and in the technique of the operation.

Three cases of cæsarean section have been observed by me, all having made good recoveries. When the operation is done at the proper time, and after the method described by Dr. Kelly, I am sure this result will be quite uniform.

The essentials of success are:

1. Operation at the proper time, before labor, or at the beginning of labor.
2. Rapidity in operating.
3. Accurate suturing.
4. Asepsis.

With reference to suturing, I believe that the Lembert suture, as ordinarily described, is purely theoretical. The peritoneum will not hold a suture. Operators have unconsciously included the deeper tissues in the so-called Lembert suture.

An important point not generally recognized in this country is that the diagnosis should be made in the last weeks of pregnancy, and under ordinary circumstances the operation be decided upon and done at the close of pregnancy, before labor sets in or immediately thereafter.

I would not do the modern cæsarean section in a case which had been tampered with by efforts to deliver with the forceps or by version; but in such cases would prefer the operation. In Philadelphia in the last four years twelve cæsarean sections have been done, and ten mothers have recovered. One that died had pneumonia at the time of the operation. The other case was one in which the surgeon at the same time removed a fibroid tumor.

Dr. B. B. Browne: I think all the procedures recommended are in the main correct, and are in accordance with the rules and suggestions laid down five or six years ago by Garrigues, Saenger and Leopold; these should be carried out in ideal cases, but unfortunately we meet with many complications which must be dealt with as they occur.

Having recently performed the operation myself and looked up the literature and technique of the subject, I was surprised to find that we can to-day make but little improvement or change for the better.

In 1886, Saenger had operated four times, saving all the women and children. Dr. Leopold had operated nine times and lost one woman, saving all the children.

Dr. T. A. Ashby: I wish to congratulate Dr. Kelly on his brilliant success with the cæsarean section.

This success is convincing proof of what can be done when the section is instituted under proper conditions and at the proper time.

The future of the operation rests upon a proper and judicious selection of the case, and upon an immediate resort to the section before other methods of delivery have been attempted and abandoned. I doubt whether the cæsarean section under such conditions will give a higher mortality than the ovariectomy of ten or fifteen years ago.

The technique of the section is simple enough, and certainly its mechanical execution is not as difficult as that necessitated in the removal of many conditions of tubal and ovarian diseases.

Hæmorrhage is not large, and it is easily controlled. Septic processes should not follow if strict aseptic precautions are observed.

The progress of the section as a substitute for other methods of delivery rests upon an early and clear recognition of the pelvic measurements, and a prompt acceptance of this method as the proper procedure in the given case. When this is done the success of the section is not compromised by unfortunate interference in other directions. When we have obtained the statistics of this class of cases, we are in a position to compare the mortality of the section with other operative methods.

Dr. W. P. Chunn: I did not hear the first part of the history of the case, but think I would have removed the ovaries or tried the fallopian tubes to prevent future conception.

It is hard to say just what operation should be done.

Dr. Noble: In doing a cæsarean section I would not touch the ovaries and tubes as Dr. Chunn speaks of doing, but would do nothing to prolong the operation. Tying of the tubes would probably cause salpingitis. This objection is purely theoretical. So far as I know this has been done only twice—once in England and once in America.

Dr. Brinton: I have been for some years interested in measuring the pelvis of women. Very often we go to labor cases without knowing anything about the condition of the pelvis.

With the hospital surgeon, who has the best facilities, the cæsarean operation will undoubtedly be the best in cases of extreme pelvic contraction. But with the average practitioner what is best? I think that with these physicians craniotomy will hold the place.

In speaking of craniotomy "holding its place," I referred to those cases of pelvic contraction where the child could be extracted without harm to the mother, say  $1\frac{3}{4}$  to 3 inches.

Dr. T. A. Ashby: I must offer an apology for presenting a series of experiences which are familiar to all who have done



much intra-abdominal work. I have brought these charred remnants of tubal and ovarian inflammation before the society to invite discussion, not to exhibit anything original. They present nearly every phase of intra-pelvic inflammation, and illustrate the various degenerative conditions which are found in the pelvis after an inflammatory fire has passed over these tissues.

Of the nine specimens here presented, removed from the same number of cases, no two are alike. In one case the tube has received the brunt of the attack, in another the ovary is involved in abscess cavities, whilst in a third both tube and ovary are tied up in a knot by adhesive inflammation, and so on through the series.

The clinical histories of these cases would be exceedingly interesting did time admit of a recital, but I shall not tax your patience with details.

We have the same old story in all of these cases save two—one, the large specimen of a tubal sac of uncertain origin, probably an interrupted tubal pregnancy of long standing, and the other, the remnants of a catarrhal salpingitis and ovaritis with intra-pelvic adhesions. Of the other seven specimens the origin of the condition is of chief interest in this connection, since they explain to my mind the essential factor in the production of the specimen here presented. Each of these women have borne one or more children; in each case the history of the intra-pelvic trouble dates from the first lying-in period, which was accompanied with mild or severe symptoms of child-bed fever. In each of these women there was an old, lacerated cervix, in some, more pronounced than in others. The histories of these cases, as far as they can be made out and can be interpreted, tell the simple story. During labor, a cervical tear occurred in this wound, septic material gained a lodgment, or septic process was established which extended from the cervix to the cavity, from the cavity to the tubes and from the tubes to the intra-pelvic peritoneum.

The severity of the symptoms in each case must have borne some relation to the septic process and to the tissues involved, though no way is offered for verifying this statement. We simply find the results in general destruction of the tube, or ovary, or of both, and the inference is that drainage was secured and pus escaped, leaving no remnants of this character behind, except in two of the specimens, in which I found pus cavities in the ovary containing each a drachm or more of pus.

These cases illustrate the fearful havoc which a septic process following parturition may occasion among the pelvic

organs. A little fire kindleth a mighty conflagration is literally true in more respects than one. In an experience with other cases I have observed this septic process in its very beginning when limited to the cervix and cavity, and I have seen the lying-in woman's temperature fall from 103 degrees to normal within twelve hours after thorough cleaning and disinfection of the cervix and cavity in these cases and a complete arrest of the process before the tubes were involved. In another case I have seen tubal and general pelvic-peritonitis in active force following immediately the infection in the cervix and cavity. This experience convinces me, despite all other theoretical teachings, that we have in the lying-in state an explanation of those intra-pelvic diseases which render the lives of so many women useless and oftentimes utterly miserable. Now is it necessary that the lying-in period should be surrounded with extra hazard, high temperature, and severe pain? Aseptic endometritis following parturition may run a very mild and low grade course, and still result in sub-involution, salpingitis, pelvic adhesions, and other intra-pelvic conditions which impair the normal function of these organs.

The lesson clearly taught by such experience is that aseptic conditions should be enforced in every case of labor, that the least suspicion of sepsis should lead to immediate investigation of the uterine cervix and cavity with a view to thorough cleaning and arrest of the septic process. If this be done, as I have done it in a number of cases seen with medical friends in consultation, we can cut short a sepsis and arrest a condition which will surely extend to the tubes and pelvic peritoneum in the absence of prompt attention.

Dr. B. B. Brown: The fact that laceration of the cervix is so frequently found in married women suffering from tubal disease is, I think, because the purulent discharge from the uterus passing over the torn surfaces prevents their union, while the septic material also extends to the tubes; when there is no septic material in the uterus the lacerated surfaces readily unite, and the tubes are not affected.

Dr. J. Whitridge Williams: The specimens exhibited represent a class of cases that are very common, and which will become more so as we become more expert in bimanual examination. Indeed, to a skilful palpator, it almost seems that the majority of women examined have more or less tubal or ovarian disease. The specimens are particularly interesting to me because I have studied carefully the pathology of a large number of similar cases.

The etiology in many cases is doubtful, but most obser

vers appear to cling to Noegerrath's theory of latent gonorrhœa. Examination of the pus in cases of pyosalpingx brings forward most interesting facts. For in most cases it is impossible to discover any species of bacteria either under the microscope or by culture methods, which shows that the bacteria which caused the trouble have long since died, for closed pus cavities are not particularly favorable for the growth of organisms. In two cases we found undoubted gonococci, and in a case following an imperfect abortion the streptococcus, and in another case the staphylococcus aureus.

Clinically the cases due to the pus organisms are much more acute and virulent than those due to the gonococcus. These results correspond with those of Zweifel of Leipzig, who has just published his observations. He also found the gono-and streptococcus, but not the staphylococcus. In one of his streptococcus cases, the subject was an undoubted virgin, and he accounted for the infection by an abscess following an attack of typhoid fever some years before.

Dr. Ashby speaks of the relation of lacerated cervix to salpingitis, etc. I can not consider it a factor in the production of the disease, and regard it merely as a coincidence. If it were a potent factor in producing the trouble we should find salpingitis and pelvic adhesions far more frequently than we do now; for we must remember that in most women there is more or less laceration of the cervix during labor.

Moreover, this cause is certainly inapplicable to the frequent cases occurring in multiparous women and especially in virgins.

A close study of the clinical history of a number of cases inclines me to believe that the majority of cases follow infection during labor or after an incomplete abortion; for in many cases it is impossible to obtain even a history of leucorrhœa before the labor, which would apparently exclude gonorrhœal infection.

By infection during childbirth, I do not necessarily mean the cases in which we have well marked puerperal fever, but the milder degree of infection as well; for most of the cases of so-called milk fever are due to infection and may give rise to serious results.

Zweifel, on the contrary, who has just published a remarkable series, 79 salpingo-oophorectomies with only one death, believes in the gonorrhœal origin of most cases. Saenger traces most of the cases in virgins back to a gonorrhœal salpingitis during childhood, which has persisted and ultimately affected the fallopian tube. While I do not feel justified in subscribing to this view, I can say that it is quite probable.



For lately I have seen a number of cases of undoubted gonorrhœa in little girls of from two to seven years of age, in which there was no suspicion of criminal action.

In eight cases of vaginitis in little girls which I have examined, I found gonococci in six of them. In several, the mode of infection was quite clear. In one case the husband acknowledged an attack of gonorrhœa with which he infected his wife during her pregnancy, and each of the children born after it had ophthalmia neonatorum, followed when they were older by gonorrhœal vaginitis. In another case, an older brother had gonorrhœa, and his two little sisters used his towels for bathing.

These remarks will show that the vaginitis of little children is not of strumous origin as generally supposed, and that it demands a more active treatment than is generally employed; especially when we consider its possible consequences.

Dr. Brinton: I can corroborate the views of Dr. Williams in regard to the specific origin of the cases of vaginitis in children. Having recently treated, first, the father with gonorrhœa, later the mother, and within a fortnight from the time the father consulted me, was called to see the little daughter, aged four, with a severe "vaginitis," which yielded to the usual treatment in about the usual time. My experience has been that if a child is found with a "vaginitis" close investigation will prove that some older member of the family has either a "urethral" or "vaginal" discharge.

Dr. Noble: Dr. Ashby has brought up so many points that it is difficult to know just what to take up.

It is now the fashion to call all unilateral collections of blood extra-uterine pregnancies, but I have recently had a case that proved not to be a pregnancy. With reference to the uterine hemorrhage coming from the tubes, we do know as a fact that it is possible for blood to come from the tubes. This was common to all in the days when the stump was treated by the extra-peritoneal method in doing ovariectomy. I am sure that gonorrhœa has been the cause of most of the cases of pyosalpinx that I have seen, and I think that the cause of salpingitis in young women is often simple infection. Many cases of dysmenorrhœa in young women are due to salpingitis. In such cases it is unnecessary to question their chastity. I agree with all the speakers in reference to the relation of lacerated cervix to salpingitis.

Where there is a laceration there is frequently an endometritis, and there is no reason to think that it may not follow out into the tube.

I believe in the great value of the drainage tube, and use

it in almost every case. When properly cared for it is practically free from objection, while being of most positive advantage in allowing the escape of serum and blood.

Dr. H. P. C. Wilson: I did an exploratory laparotomy for a fibro-cystic tumor. In manipulation I found great tendency to bleeding, and as I could not get at the ovaries nor remove the tumor without causing death, I closed the abdomen. She got on well for fourteen hours, when she became very feeble: heart and respiration very weak. She was put upon digitalis and muriate of quinine and urea, but it did no good. The heart became so weak that the pulse could not be felt. I then began with five minims of tincture of strophanthus every three hours, and ether in doses of two minims hypodermically every three hours. The pulse became stronger, 125 to the minute, and she felt better. The next day she became unconscious, pupils dilated, face flushed, pulse, 120; temperature, normal. The medicine was withdrawn, but she remained in this condition about twenty-four hours. To-day she is better, consciousness returning, pupils contracting. I have had no experience with the poisonous effects of strophanthus.

WILLIAM S. GARDNER, M. D.,  
*Secretary.*

PROCEEDINGS OF THE TWELFTH ANNUAL MEETING OF THE  
LOUISIANA STATE MEDICAL SOCIETY.

HELD IN NEW ORLEANS, MAY 13, 14, AND 15, 1891.

The twelfth annual meeting of the Louisiana State Medical Society began at noon, on May 13, 1891, in Tulane Hall. The initial attendance was very small. The meeting was called to order by the president, Dr. C. D. Owen, of Eola, La.

Prayer was offered by the Rev. Thos. R. Markham.

Mayor Shakspeare in a brief address welcomed the visiting members of the society.

The morning session was devoted to organization and routine work.

Dr. Blanc, of the Committee of Arrangements, reported verbally that the work entrusted to the committee had been performed.

The Committee on Necrology asked for further time, which was granted.

As none of the members of the Judiciary Committee had arrived, the report of this committee was postponed.

The secretary, Dr. P. B. McCutcheon, made a verbal report upon the publication of the transactions of the last meeting, held in 1889.

Dr. A. B. Miles, acting chairman, reported on behalf of the auxiliary committee appointed *ad interim* by the president in 1890, to draft a bill to be offered in the State Legislature for the purpose of regulating the practice of medicine in Louisiana. Dr. Miles stated that the reason that only his signature was appended to the report was that no other members of the committee could be seen in time to obtain their signatures and that no discourtesy was intended. In referring to the report Dr. Miles said that the bill was indefinitely postponed at the last session of the Legislature on account of the opposition which appeared at the last moment.

When the report was put before the House for adoption, Dr. Chas. Chassaignac said that he had been delegated by the Orleans Parish Medical Society to urge the passage of the medical practice bill: and, carrying out his instructions, he had gone to Baton Rouge to do what he could to have the bill passed. The bill was presented in the House, and it passed the House. It then went to the Senate, was referred to the proper committee, was favorably reported, but, when success seemed certain, an unexpected opposition caused the bill to be indefinitely postponed. It was asserted that one of the members of the State Medical Society was instrumental in causing the virtual defeat of the bill. Such a matter certainly calls for investigation.

Dr. S. E. Chaillé suggested that, as the discussion had already consumed some time, and would probably consume more time, it might be well to make the matter the special order of the day at the following morning session.

Upon motion, it was decided to make the discussion upon the Medical Practice Bill the order of the day, at 10 a. m., May 14, 1891.

The committee on Medical Library requested further time, which was granted.

An invitation to a reception by Dr. and Mrs. Sam'l Logan was read. The invitation was accepted, and a vote of thanks passed.

Dr. Miles, house surgeon of the Charity Hospital, invited the members to visit that institution. His invitation was accepted with thanks.

The following gentlemen were proposed for membership: By Dr. T. J. Wolf, Dr. T. R. Tolson; by Dr. Ducate, Dr. W. D. Haas and T. F. Burgess; by Dr. Parham, Drs. L. C. Anderson, M. J. Magruder and E. Denègre Martin; by Dr.



Chassaignac, Dr. J. L. Deslattes ; by Dr. McCutcheon, Dr. W. G. Owen ; by Dr. Mudd, Dr. F. Mouton ; by Dr. Fox, Jr., Dr. Wharton ; by Dr. Miles, Drs. W. E. Parker, H. S. Cocram and E. A. Smith ; by Dr. Owen, Dr. A. D. Pierce.

These names were referred to the Judiciary Committee, but owing to the absence of the regular committee, a temporary judiciary committee had to be appointed in order not to delay business. This temporary committee was composed of the vice presidents of the society, namely: Drs. A. B. Miles, Chas. Chassaignac, Thos. Hébert, J. C. Brown, R. W. Seay and J. S. Branch.

Adjournment.

#### EVENING SESSION.

The evening session was called to order at 8 p. m., by the president.

Dr. I. J. Newton, of Bastrop, of the auditing committee, reported that the books of the financial secretary and treasurer had been examined and found correct. The report was adopted.

Dr. Newton, to whom the chair had been yielded, then presented to the audience the president, Dr. C. D. Owen, of Eola, La., who read his annual address. [See page 903 of this issue of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*.]

At the conclusion of the address, Dr. Chassaignac said that the recommendations made therein were important, and worthy of the earnest attention of the society. He moved that a committee of three be appointed to consider the president's address and report the next day upon the advisability of adopting the president's recommendations. Carried.

The chair appointed Drs. Chassaignac, Logan and D. R. Fox.

Adjournment.

#### SECOND DAY—MORNING SESSION.

The meeting was called to order at 10:30 A. M.

Dr. Newton moved that the physicians from other States who were at the time in New Orleans, most of them attending the lectures of the N. O. Polyclinic, be invited to participate in the scientific discussions of the society. Carried.

At the previous morning session, it was resolved to make the special order of the day the medical practice bill and the causes that led to its postponement by the Legislature. In order to bring the subject before the meeting in proper form, it was decided to have read the report of the provisional committee appointed by the president in 1890.

The report drawn up by Dr. Miles was read and laid before the house for discussion.

Dr. Bruns said that he was a member of the provisional committee, and he was one of the men delegated to go to Baton Rouge and present the merits of the proposed law to the members of the Legislature. He said that the bill had passed the House by a large majority, and when it was before the Senate, a letter, protesting against its passage, was forwarded by the homœopaths of this city. Another letter, from a member of this society, was circulated among the senators, recommending oppositon to the bill; it was this unlooked-for opposition that caused the defeat of a measure calculated to raise the standard of medical education in Louisiana. The society owed it to itself to investigate this matter, and ascertain, if possible, what motive could have actuated one of its own members to pursue a course so clearly hostile to the interests of the profession of Louisiana.

Dr. Logan said that, instead of trying to find out why any single individual opposed the bill, it would be better to discuss the features of the bill *seriatim*. In that way, opposition to any particular feature could be brought to light, and any flaws that might be found in it could be corrected.

Dr. de Roaldes spoke to the same effect. He said that the opposition was not directed against the bill in its entirety, but against certain parts of it. The quickest way to find out what is objectionable is to go over the bill section by section.

Dr. Bruns asked that the chairman of the provisional committee (Dr. Miles) be requested to mention the quarters from which the opposition proceeds.

Dr. Miles said that the homœopaths objected because they feared that the bill would be retroactive. They objected to it in that it granted to six men the absolute right to determine who was and who was not qualified to practise medicine; that the medical profession would be at the mercy of a layman, the Governor of the State; and that it violated the constitution of the United States. The medical department of Tulane also objected to the bill, and the Shreveport Medical Society also objected to certain features of it.

Dr. Chassignac read an extract of the proceedings of the Shreveport Medical Society in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. It was evident from the published proceedings that the said society merely suggested certain amendments, but did not oppose the bill as a whole.

Dr. Bruns discussed the objections of the homœopaths, especially the charge that the bill was retroactive. Dr. Bruns read a passage from the bill and the wording clearly showed that the bill could not be made retroactive.

Dr. Logan said that he did not know of any opposition to the bill on the part of the medical department of Tulane University. For his part, he did not fear to have any graduate that passed through his hands stand an examination before any board of examiners.

Dr. Parham moved that the report of the provisional committee be received and the committee investigate the matter most fully.

Dr. Jos. Jones said that during the discussion a great many insinuations had been thrown out concerning a certain member of the society who had written a letter opposing the bill, and that this letter was responsible for the failure of the bill to pass. It was well known to every one that the person meant was himself, and he would not rest under any such imputation. Dr. Jones maintained that the bill in question did not really emanate from the State Society, and did not represent the sense of the society upon the question. The provisional committee appointed last year was not the society, and could not usurp the authority of the society. The medical profession had rights which could not be ignored by State officials. He had so expressed himself in a letter to a patient who was a member of the Legislature, and this man violated Dr. Jones' confidence, and showed the letter to a fellow-member of the Legislature. Dr. Jones regarded it as absurd to say that a letter of advice to a patient could cause the defeat of the bill. In his letter he urged his patient to examine the bill closely, so that it would not bring disaster upon the profession in Louisiana. Dr. Jones repeated that the defeat of the bill was not due to any act of his. Again, he had written a private letter. There had been a breach of confidence; his private correspondence had been violated and hounded, and this was not the course for gentlemen to pursue.

Dr. Chassaignac said that the committee had engaged an attorney, Mr. W. S. Parkerson, to look after the bill before the Legislature, and that the gentleman was present at the meeting. He requested that Mr. Parkerson be allowed to take the stand and state what he knew about the influences that brought about the defeat of the bill.

No objection was raised, and Mr. Parkerson mounted the rostrum.

Mr. Parkerson said that, in the House Mr. Bland was the only representative who opposed the measure, and he had been instructed by the Shreveport Medical Society to oppose it. The opposition from Lafourche was overcome by a correction in the bill, which was then sent to the Senate. Senator Murphy J. Foster opposed the bill because it appeared to reflect



unfavorably on Tulane University, but this objection was quickly disposed of.

Thinking that all opposition had been overcome, Mr. Parkerson returned to New Orleans, but a telegram from a senator caused him to return to the capital. When he arrived there he was informed by a senator, who had favored the bill at first, that he was opposed and that his opposition was due to a letter from Dr. Joseph Jones.

Dr. Archinard said that, inasmuch as there was an accusation against Dr. Joseph Jones of having aided in defeating the bill, and a counter-accusation from him that the members of the provisional committee had pried into and hounded his private correspondence, he would move that the whole matter be referred to the Judiciary Committee. Carried.

After some more discussion, a recess was taken until 3 p. m., when the bill would be taken up and discussed *seriatim*.

#### AFTERNOON SESSION.

Called to order at 3:30 p. m.

Dr. Chassaignac reported that the temporary Judiciary Committee had examined the names of all the applicants, and reported favorably upon them.

In speaking of fresh accessions, the president said that it was more desirable to have the best class of physicians on the roll, rather than to have merely a large number. He urged that members recommending physicians for election should publicly vouch for the standing of the candidate.

Dr. Bruns said that since the president seemed to object to the report, he be requested to state explicitly why he objected.

The president said that all he objected to was the election of Dr. Burgess. He stated that he would present his objections to the Judiciary Committee.

Dr. Burgess' name was referred back to the Judiciary Committee.

Dr. Bruns reminded the meeting that discussion of the Medical Practice Bill, *seriatim*, was made the special order of the day for the afternoon session.

The reading and discussion of the bill occupied the time up to 6 p. m. [The full text of the amended bill will be given in a subsequent issue of the JOURNAL.]

The election of officers for the following year was held with the following result: President, Dr. John B. Elliott, New Orleans; First Vice President, Dr. ———, ———; Second Vice President, Dr. R. Matas, New Orleans; Third Vice President, Dr. J. C. Bickham, New Orleans; Fourth Vice

President, Dr. D. Mudd, Lafayette; Recording Secretary, Dr. P. B. McCutchon, New Orleans; Treasurer, Dr. R. H. Day, Baton Rouge.

Adjournment.

THIRD DAY—MORNING SESSION.

Called to order at 10:30 a. m.

The Judiciary Committee reported favorably on the following applicants for membership: Drs. A. A. Allain, J. C. Munday, A. T. Barrow, J. B. Hargrove, C. Thos. Ray, R. U. Borde, C. M. Fortier, Henry Bayon, J. M. Elliot, J. W. Thomas.

*Date and Place of Next Meeting.*—The next annual meeting will be held in New Orleans, beginning on the second Tuesday in May, 1892. (Afterwards reconsidered).

The Committee on Necrology reported the following deaths of members since the last meeting: Dr. Thos. W. Compton, of Alexandria; Dr. D. M. Clay, of Shreveport; Dr. R. C. McCulloch, of Waterproof; Dr. Louis G. Blanchet, of New Iberia; Dr. John Pintard Davidson, of New Orleans. The report was adopted.

Dr. Chassaignac, chairman of the special committee on the President's Address, reported that the committee deemed it advisable to refer all names proposed for membership hereafter to the Judiciary Committee, with instructions to investigate them fully and to submit a report at the following annual session. The committee also urged the creation of a section on otology, rhinology and laryngology, and separate them from the section of ophthalmology, of which they now form a part.

The report was received.

The society proceeded to act upon the case of Dr. Jas. A. Ware, of Lake Charles, La., who, "for gross unprofessional conduct," had been expelled from the Calcasieu Parish Medical Association.

After some discussion, the action of the Calcasieu Association was sustained, and Dr. Ware was expelled from the State Medical Society.

Dr. J. B. Elliott made a verbal report on the grippe and its treatment.

Dr. R. Matas read a paper on "Infusion of Salt-Solution in Acute Anæmia." [This paper will be published in the July number of the *Journal*.]

## AFTERNOON SESSION.

Called to order at 4 P. M., Dr. J. J. Newton in the chair.

Dr. Owen spoke of the arrears in the dues of the affiliated societies, and in particular of that of the Attakapas Medical Society, one of the strongest in the State, and of which he is a member.

There was some discussion of the compromises suggested and it was finally decided to accept thirty dollars as full payment of the dues of the Attakapas Medical Society.

Dr. Miles reported a very interesting case of a patient (aged thirteen years) upon whom ovariectomy was performed. The tumor removed was found to be a dermoid cyst, which was exhibited to the society.

Dr. H. W. Blanc, of New Orleans, read a paper, "Erythema Scarlatiniforme;" he also exhibited photographs showing incipient leprosy in a negro, and an epithelial cast of a hand, caused by a recurring exfoliation of the horny layer of epithelium of the whole hand.

Dr. J. J. Newton's paper on "Diseases of Children" was read by titles.

Dr. A. G. Friedrichs read a paper on "Oral and Dental Surgery."

The following papers were read by title: "Trichloracetic Acid in the Treatment of Hypertrophy of the Lingual Tonsil," by Dr. A. McShane. "Depressed Compound Fracture of the Skull," by Dr. G. Randolph Fox.

The chair appointed Drs. G. W. Owen, P. B. McCutcheon and R. Matas a committee to examine all applicants for membership.

The retiring president, Dr. C. D. Owen, in a few choice words introduced his successor, Dr. J. B. Elliott, to whom he yielded the chair.

Dr. Newton moved a reconsideration of the motion setting the next meeting for the second Tuesday in May, 1892. He moved that the date be changed to the second Tuesday in April, 1892. Carried.

Dr. J. B. Elliott appointed the following committees for the coming year:

Arrangements: Dr. J. H. Bemiss, chairman. Necrology: Drs. R. Matas, C. J. Bickham, F. S. Mudd, A. A. Lyon, I. J. Newton, Jr., C. D. Owens. Publication: Drs. McCutcheon, Day, McShane, Blanc, Scherck. Organization: Drs. Elliott, Matas, Bickham, Mudd, Lyon, Newton, C. D. Owens. Judiciary: Drs. Day, Bickham, Fox, Sr., Newton, McCutcheon, T. S. Allen. State Medicine: Drs. Miles, Newton, Matas, Bruns, Archinard, Bemiss, Reynard, A. F. Meeker, Bratch,



Logan, Buffington, Martin, A. A. Lyon, J. C. Eagan, D. Jamison, C. J. Bickham. Library: Dupree, Ducote, Anderson, Hooper, Jos. Jones, Formento, Owens, Munday.

Dr. Miles moved that all members of the State Medical Society who would be elected to the next Legislature, or who were at present members of the legislative assembly, should be made *ipso facto* members of the Committee on State Medicine. Carried.

Upon motion of Dr. Blanc a section on quarantine was created. The President appointed Dr. Formento, chairman of the section.

A section on Laryngology, Rhinology and Otology was created. Dr. A. W. de Roaldes was appointed chairman of the new section.

The temporary judiciary committee having under consideration the case of Dr. Burgess, reported through Dr. Miles that it had listened to the charges brought against Dr. Burgess: but, owing to the limited time that had been given the committee to examine into the matter, it was deemed best to give Dr. Burgess a chance to be heard in defence, so that final action in debarring him from membership would not be taken hastily.

The committee was discharged and its report received and ordered referred to the new judiciary committee.

Votes of thanks were passed to Mayor Shakspeare, to the press and to Tulane University; also to the committee of arrangements and the retiring officers.

On motion of Dr. Y. R. LeMonnier a section on medical jurisprudence was created. Dr. LeMonnier was appointed chairman, with power to select other committeemen.

Final adjournment, to meet on the second Tuesday in April, 1892, in New Orleans, La.

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## SELECTED ARTICLES.

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### THE RESULTS OF TOTAL EXTIRPATION OF THE UTERUS FOR CANCER, AS OBSERVED IN THE ROYAL HOSPITAL FOR WOMEN, IN DRESDEN, BY DR. EDWARD LEISSE, FIRST ASSISTANT.

Translated by DR. H. J. SCHERCK, Chief of Clinic to Chair of Surgery, New Orleans, La.

In consequence of the criticism that was agitated by a previous article on the above subject, Prof. Leopold has taken this opportunity to have again published the results of his observations.

With this object in view he communicated with all those patients yet living, begging them to either come to the hospital or at least write as regards their present condition.

These requests were sent to only those that had been operated on two years or more previous to date.

The result of his inquiries can be seen in the following pages, which have been so arranged as to be easily compared with the following previously published articles on the same subject (*Archiv. für Gynæcol. Bd. XXX and XXXVI, Münchener Med. Wochenschrift, No. 46, 1890*); in fact, consists of all cases operated on for uterine cancer in this hospital prior to May, 1889. And thus in the following pages the results are arranged. Of these eighty cases all are of a duration of two years or more, viz: Still living, 45=56.25 per cent.; total died, 35=43.75 per cent. Toward the end of the table the death rate seems to be larger, but it is due to the fact that with increased practice more difficult cases were attempted, and with such cases less good results can be expected.

| No. | Name.       | Date of Operation. | AFTER COMMUNICATION WITH PATIENTS.                                                                     |                                                                                                                       |
|-----|-------------|--------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|     |             |                    | Answer.                                                                                                | Examination.                                                                                                          |
| 1   | Mrs. Kr.    | Oct. 11, '83       |                                                                                                        | Jan. 27, '91, no return, smooth cicatrix                                                                              |
| 2   | Mrs. K.     | Oct. 12, '83       |                                                                                                        | Apr. 18, '91, no return, smooth cicatrix                                                                              |
| 3   | Mrs. R.     | Sept. 11, '84      |                                                                                                        | Feb. 9, '91, no return, smooth cicatrix                                                                               |
| 4   | Mrs. M. †   | Sept. 29, '84      | Died.                                                                                                  |                                                                                                                       |
| 5   | Mrs. R.     | Sept. 30, '84      | Jan. 18, '91, feels perfectly well                                                                     | May 4, '91, no return, smooth cicatrix                                                                                |
| 6   | Mrs. M.     | Dec. 2, '84        | Died.                                                                                                  |                                                                                                                       |
| 7   | Mrs. Schm.  | Dec. 11, '84       | Died.                                                                                                  |                                                                                                                       |
| 8   | Mrs. Suaf.  | Jan. 27, '85       |                                                                                                        | Jan. 12, '91, no return, smooth cicatrix                                                                              |
| 9   | Mrs. Hipp.  | Jan. 30, '85       | Mar. 25, '91, very well.                                                                               |                                                                                                                       |
| 10  | Mrs. G.     | May 10, '85        | Died.                                                                                                  |                                                                                                                       |
| 11  | Fr. Fisher. | June 4, '85        |                                                                                                        | Mar. 31, '91, no return, smooth cicatrix                                                                              |
| 12  | W. N.       | June 13, '85       | Died.                                                                                                  |                                                                                                                       |
| 13  | F. W.       | June 18, '85       |                                                                                                        | Perfectly well, April 11, '91. (F. P.)                                                                                |
| 14  | Fr. Bl.     | July 3, '85        |                                                                                                        | Apr. 7, '91, no return, smooth cicatrix                                                                               |
| 15  | F.          | July 11, '85       |                                                                                                        | Apr. 2, '91, no return, smooth cicatrix                                                                               |
| 16  | Mrs. Rost.  | July 24, '85       | Died, phthisis.                                                                                        |                                                                                                                       |
| 17  | Mrs. Erd.   | Sept. 20, '85      | Died.                                                                                                  |                                                                                                                       |
| 18  | Mrs. Sieber | Nov. 3, '85        |                                                                                                        | Jan. 27, '91, no return, smooth cicatrix                                                                              |
| 19  | Mrs. Schü.  | Nov. 10, '85       | Died.                                                                                                  |                                                                                                                       |
| 20  | Mrs. Gl.    | Nov. 19, '85       |                                                                                                        | No return, March 24, 1891.                                                                                            |
| 21  | Mrs. Fr.    | Nov. 26, '85       | Died.                                                                                                  |                                                                                                                       |
| 22  | Mrs. H.     | Jan. 6, '86        | Died.                                                                                                  |                                                                                                                       |
| 23  | Mrs. Str.   | Jan. 19, '86       | Mar. 15, '91, states she feels perfectly well; confirmed by husband and daughter.                      |                                                                                                                       |
| 24  | Mrs. H.     | Jan. 26, '86       | Mar. 15, '91, feels in perfect health.                                                                 |                                                                                                                       |
| 25  | Oc.         | Feb. 4, '86        |                                                                                                        | Mar. 25, '91, no return, smooth cicatrix                                                                              |
| 26  | K.          | Feb. 5, '86        |                                                                                                        | Feb. 9, '91, no return, smooth cicatrix                                                                               |
| 27  | Mrs. Th.    | Mar. 2, '86        |                                                                                                        | April 27, 1891, no return.                                                                                            |
| 28  | Mrs. Lt.    | Mar. 6, '86        |                                                                                                        |                                                                                                                       |
| 29  | Mrs. Zi.    | Mar. 27, '86       |                                                                                                        |                                                                                                                       |
| 30  | Mrs. Heusp  | Mar. 30, '86       | Mar. 25, '91, says she feels badly. April 25, '91, from her physician: can find no evidence of return. | April 30, '91, no return, but a small vesico-vaginal fistula since operation. (See <i>Archiv. f. Gyn. Bd., XXX.</i> ) |

| No. | Name.          | Date of Operation. | AFTER COMMUNICATION WITH PATIENTS.      |                                                                                             |
|-----|----------------|--------------------|-----------------------------------------|---------------------------------------------------------------------------------------------|
|     |                |                    | Answer.                                 | Examination.                                                                                |
| 31  | Mrs. Berth     | May 21, '86        | Feels in fair health.                   | Catarrh of lung; no return of cancer                                                        |
| 32  | Mrs. Behr      | June 30, '86       | .....                                   | Apr. 23, '91, no return, smooth cicatrix                                                    |
| 33  | Mrs. Besser    | July 2, '86        | .....                                   | Mar. 3, '91, no return, smooth cicatrix                                                     |
| 34  | Mrs. Nott      | July 24, '86       | Died.                                   | .....                                                                                       |
| 35  | Mrs. Kum.      | Aug. 14, '86       | In perfect health.                      | .....                                                                                       |
| 36  | Mrs. Schm.     | Sept. 16, '86      | Died.                                   | .....                                                                                       |
| 37  | Mrs. Sl ....   | Oct. 15, '86       | Mar. 15, '91, feels well and healthy.   | .....                                                                                       |
| 38  | Mrs. Arlt      | Oct. 22, '86       | .....                                   | Apr. 4, '91, no return, smooth cicatrix                                                     |
| 39  | Mrs. Rasch     | Jan. 4, '87        | Died; intestinal occlusion.             | .....                                                                                       |
| 40  | Mrs. Bohm      | Feb. 2, '87        | Died.                                   | .....                                                                                       |
| 41  | Mrs. Rinck     | Mar. 2, '87        | .....                                   | Apr. 2, '91, no return, smooth cicatrix                                                     |
| 42  | Mrs. Muller    | Mar. 17, '87       | Died.                                   | .....                                                                                       |
| 43  | Mrs. Hi .....  | May 24, '87        | .....                                   | Apr. 20, '91, no return, smooth cicatrix                                                    |
| 44  | Mrs. Hens.     | June 21, '87       | Died.                                   | .....                                                                                       |
| 45  | Mrs. Tred.     | June 20, '87       | .....                                   | No return, smooth cicatrix, Apr. 6, '91                                                     |
| 46  | Mrs. Her ..... | July 20, '87       | .....                                   | Jan. 12, '91, no return, smooth cicatrix                                                    |
| 47  | Mrs. Lo .....  | Aug. 6, '87        | Died.                                   | .....                                                                                       |
| 48  | Mrs. R .....   | Aug. 22, '87       | .....                                   | Feb. 17, '91, no return, smooth cicatrix                                                    |
| 49  | Mrs. Jh ....   | Aug. 27, '87       | Died; peritonitis.                      | .....                                                                                       |
| 50  | Mrs. Wi ....   | Aug. 29, '87       | .....                                   | Jan. 26, '91, in perfect condition.<br>(Family physician.)                                  |
| 51  | Mrs. Zi .....  | Oct. 28, '87       | .....                                   | Jan. 18, '91, no return, good health.<br>(Dr. Korn of Dresden.)                             |
| 52  | Mrs. Sch...    | Nov. 29, '87       | Died.                                   | .....                                                                                       |
| 53  | Mrs. Mu .....  | Dec. 14, '87       | Died.                                   | .....                                                                                       |
| 54  | Mrs. Wich.     | Dec. 16, '87       | Died.                                   | .....                                                                                       |
| 55  | Mrs. Neu...    | Feb. 7, '88        | Died.                                   | .....                                                                                       |
| 56  | Mrs. Rieg.     | Feb. 9, '88        | .....                                   | Jan. 23, '91, no return, smooth cicatrix                                                    |
| 57  | Mrs. Mie...    | Feb. 24, '88       | April 23, '91, feels in perfect health. | .....                                                                                       |
| 58  | Mrs. Neub.     | Mar. 14, '88       | Jan. 13, '91, never felt better.        | .....                                                                                       |
| 59  | Mrs. Kat...    | April 11, '88      | Jan. 12, '91, feels perfectly well.     | Apr. 24, '91, no return, smooth cicatrix                                                    |
| 60  | Mrs. Weiz.     | May 29, '88        | .....                                   | Mar. 31, '91, no return, smooth cicatrix                                                    |
| 61  | Mrs. Gu .....  | June 11, '88       | Died.                                   | .....                                                                                       |
| 62  | Mrs. R .....   | July 12, '88       | .....                                   | Jan. 15, '91, no return, smooth cicatrix                                                    |
| 63  | Mrs. Dier.     | July 28, '88       | Died.                                   | .....                                                                                       |
| 64  | Mrs. Lel ..... | Aug. 3, '88        | .....                                   | Feb. 23, '91, no return, smooth cicatrix                                                    |
| 65  | Mrs. Forb.     | Oct. 23, '88       | Died.                                   | .....                                                                                       |
| 66  | Mrs. Eng.      | Nov. 1, '88        | Jan. 15, '91, in good health.           | .....                                                                                       |
| 67  | Mrs. Weinh.    | Nov. 27, '88       | .....                                   | Apr. 4, '91, no return, smooth cicatrix                                                     |
| 68  | Mrs. Dree.     | Dec. 22, '88       | Died.                                   | .....                                                                                       |
| 69  | X .....        | Jan. 28, '89       | .....                                   | Jan. 10, '91, no return, smooth cicatrix                                                    |
| 70  | Mrs. Schö.     | Feb. 7, '89        | .....                                   | Apr. 2, '91, no return, cicatrix very soft, in the left side of scar a small reddened spot. |
| 71  | Mrs. Ferm.     | Feb. 19, '89       | Died.                                   | .....                                                                                       |
| 72  | Mrs. Scho.     | Mar. 11, '89       | Died.                                   | .....                                                                                       |
| 73  | Mrs. Sche.     | April 2, '89       | .....                                   | Mar. 28, '91, no signs of return. (F.P.)                                                    |
| 74  | Mrs. Kow.      | April 4, '89       | .....                                   | Apr. 10, '91, no return, smooth cicatrix                                                    |
| 75  | Mrs. Tip...    | April 11, '89      | Died.                                   | .....                                                                                       |
| 76  | Mrs. Ro .....  | April 15, '89      | Died.                                   | .....                                                                                       |
| 77  | Mrs. Rec...    | April 30, '89      | .....                                   | Mar. 15, '91, in perfect condition. (F. P.)                                                 |
| 78  | Mrs. Urp...    | May 1, '89         | Died.                                   | .....                                                                                       |
| 79  | Mrs. Ullb.     | May 7, '89         | Died.                                   | .....                                                                                       |
| 80  | Mrs. W .....   | May 9, '89         | Died.                                   | .....                                                                                       |

Referring to the thirty-five fatal cases which interest us most with regard to the return of the cancer, we must deduct (8) eight cases that died before there was any possible time for the return of the growth to take place. After leaving these cases out of consideration we have a list of twenty-seven fatal cases out of seventy-two operations—37.5 per cent. that have died from return of the growth and 62.5 per cent. that are living two years after date of operation.



We have also placed in the list of cases where the growth has returned all cases where we could not most positively establish the cause of death from some other disease.

Of the forty-five patients still living, 37 or 82.2 per cent. have been seen; 8 or 17.8 per cent. have been seen of the first thirty-seven. Thirty-two (32) have been examined by us at the hospital, five (5) by physicians, some by their family physicians, others by Gynæcologists here in Dresden. The written replies to our communication have been with but one exception most positive in their assurances of perfect health, as can be seen by referring to the table. No. 30 says "she feels badly," and after examination by her physician writes "that he can find no evidence of return by an examination or otherwise." During the printing of this article it was endeavored to persuade her to again return for examination.

Of all the patients examined by us, they were found to feel well, and also give no evidence of return, save in case No. 70, where perhaps the very first evidences of return were visible. Further examination must, however, determine this question.

No. 30 complains of trouble due to the small vesico-vaginal fistula.

In conclusion, let us glance at the list of the previously mentioned cases, eighty in all, who are, after the lapse of two years or more, in good health :

|   |       |    |        |       |            |    |     |    |    | Per cent.                |
|---|-------|----|--------|-------|------------|----|-----|----|----|--------------------------|
| 2 | years | or | longer | after | operation, | 45 | out | of | 80 | operations. .... = 56.25 |
| 3 | "     | "  | "      | "     | "          | 34 | "   | 58 | "  | ..... = 58.6             |
| 4 | "     | "  | "      | "     | "          | 25 | "   | 42 | "  | ..... = 59.5             |
| 5 | "     | "  | "      | "     | "          | 18 | "   | 30 | "  | ..... = 60               |
| 6 | "     | "  | "      | "     | "          | 6  | "   | 9  | "  | ..... = 66.6             |
| 7 | "     | "  | "      | "     | "          | 2  | "   | 2  | "  | ..... = 100              |

## EDITORIAL ARTICLES.

### THE TWELFTH ANNUAL MEETING OF THE LOUISIANA STATE MEDICAL SOCIETY.

The meeting of our State society, held last month, was awaited with great anxiety by many of the well-wishers of the profession of Louisiana. It was feared by some that there would not be enough vitality in the society to have a success-

ful meeting. The meeting is now among the things of the past, and those who have its interests at heart and can appreciate the situation are encouraged by the showing made at the last meeting.

This meeting was a fair test of the vitality of the society. We have said more than once that the spirit of medical organization in Louisiana is not very strong and well developed: still, there are some public-spirited and progressive men in our ranks who are always ready to make personal sacrifices for the good of the profession at large and who, we hope, will ultimately succeed in leavening the mass.

The attendance at the meeting was fifty-five, mostly physicians from the city, who were not put to any expense to attend the meeting. Much praise is due to those of our confreres who live away from the city, and who could only discharge their duty to the society at considerable personal expense and inconvenience.

\* \* \*

Was the meeting a successful one? In view of recent troubles, our answer is in the affirmative. This meeting was almost a resurrection. The wide-spread disasters of last year wellnigh disrupted the society. The fair attendance at the recent meeting shows that there is considerable recuperative power in the society, and allows us to hope for a bright and successful future for our State body. Nothing need be hoped, however, unless an aggressive campaign of organization be carried on persistently and intelligently. A few spurts of enthusiastic campaign work rarely accomplish lasting good results; the telling, permanent results are only brought about by efforts directed to a definite end, and maintained uninterruptedly. The State society should be repeatedly brought to the attention of those of the profession who are not now members; the real, hard missionary work is to be done among them. Two facts should be prominently and persistently brought to their attention: 1, their duty to the rest of the profession; 2, the advantages to be derived from membership in the State society. Many men are stiff-necked and do not like to be told that such and such is their duty, but the manner of telling is a minor affair; the great point is to awaken, or

develop, in them a feeling that there is an active, ever-present obligation on the part of every physician of the State to help his neighbor in matters professional. When this feeling is aroused we need not worry about the State society; it will spring, as if by magic, into vigorous existence.

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Difficult as it is to foster a spirit of organization among our physicians, it is still more difficult to make the unbelievers see what advantage they can derive from membership in a society which is weak because of their own shortcomings. "What good will it do me to join your society?" they ask. The answer is not easy as the question.

In the course of the debate on the medical practice bill, Dr. S. E. Chaillé said that he had labored hard to build up the State society in the beginning of its career; but he became heartsick when he saw how feeble was the response of those to whom appeals were made to join the society. Dr. Chaillé had studied the workings of the various State societies and he had seen that that of Alabama was the strongest, most compact, and endowed with the most functions. It was virtually a part of the Legislature on all matters pertaining to public health and the practice of medicine in Alabama. Physicians were eager to become members of such a society. But the Louisiana body has no inducements to offer, and nobody cares to incur what seems to him to be a useless expense, giving no return whatever.

This sad lack of inducements was recognized, and an effort made last year to supply the want. The Medical Practice Bill would have helped to elevate the standard of the medical profession; and, as the production of the State society, it would have reflected credit upon that body, giving it greater prestige in the eyes of the people, and vindicating its claim to being the guardian of the interests of the profession of Louisiana. This promising flower was unfortunately nipped in the bud; how it was done is shown in the report of the proceedings of the society.

One defeat will not depress the spirits of the society. It is engaged in a good cause, and temporary reverses will serve only to point out the defects in its armor, and enable it all the better to prepare for a victorious contest.



## IS THE AGE OF MIRACLES PAST ?

Unbelievers and defamers of holy things and traditions would have us think that the age of miracles is past and dead, beyond all hope of resurrection. The clipping below from the *North American Practitioner*, of Chicago, May, 1891, bids us hope that there is at least a trace of that incomprehensible and indefinable power that was so common among men in the glorious ages of faith when dirt and sancity were abroad among the people.

“The low status of the science of medicine in St. Louis is evidenced by the following clipping from a daily paper of this city:

“ST. LOUIS, Mo., April 12.—The Sisters of the Visitation report a miracle which was performed in their midst last Thursday morning. For the last five years Sister Mary Philomena has suffered from what was believed to be an abscess that threatened final injury to the brain. She bled from the nostrils, eyes and ears for hours. Partial blindness resulted from these attacks. Recently Dr. Adolph Alt gave up all hope of recovery unless an operation was performed. The sister was given the right to choose for herself. Her decision was that before she would submit to an operation she would ask that “novenas” be said to the blessed Sister Mary Margaret in her behalf. She did not ask for prayers for her recovery, but simply that “God’s will be made plain to her.”

“Tuesday morning Sister Baptista visited the sick nun in her cell and offered up a “novena” in private prayer. She also gave her a relic, a piece of linen worn by Sister Mary Margaret hundreds of years ago, and a vial of holy water with which to bathe her bleeding eyes. In a paroxysm of pain Wednesday night Sister Philomena swallowed the blessed relic. When she awoke Thursday she felt a strange pricking just above her left eye. Lifting her hand to the spot she felt a metallic substance, which she grasped and pulled out. It was a needle, and transfixed on its point was the linen relic that the sister had swallowed the night before. The truth of this marvelous miracle is vouched for by Dr. Alt and the mother superior. How the needle ever entered or reached the place where it was found is unknown.’

“When the St. Louis doctors have to call the saints to their aid things must be in a truly desperate condition.

“The whole affair reminds us of the miraculous thoracentesis performed on the prophet Mohamed at a tender age. The Arab historians state that while he and his foster brother, Masroud, were playing together they were disconcerted and startled by the appearance of two angels who laid Mohamed on the ground and one of them, the Archangel Gabriel, opened his thorax and, taking out his heart, squeezed therefrom the remnants of original sin inherited from our forefather, Adam, in the shape of sundry black drops, after which, replacing the organ in this aseptic condition, they winged their way aloft.”

Now, it is wrong for the scoffing and ungodly editor of the Windy City thus to disparage things of which he (nor any other man) knows nothing. Instead, however, of restricting the use of pieces of the garment to the removal of foreign bodies, we would like to offer a suggestion to the prospective saint. Why not “boom” the miraculous remedy as a cure for inflamed piles? To scoffers and unbelievers it would be easy to understand the action of the new addition to the materia medica, since it would, in the course of events, act locally, and not require an effort of faith to transfer the rag from the stomach (by way of the capillaries?) to the forehead. If faith can move a mountain, why can’t it move a piece of underskirt? There is a great future in store for the garments of the lamented embryo saint if it be properly worked. The suggestion we have thrown out might be of some service, and would, if used judiciously, advance the interests of religion—at least among those who would cease to be tortured by angry hæmorrhoids.

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*The British Journal of Dermatology*, published by Mr. H. K. Lewis, Gower street, London, will, in future, be under the direction of a committee, consisting of Dr. H. G. Brook, Dr. H. Radcliff Crocker, Dr. T. Colcott Fox, Mr. Malcolm Morris, Dr. T. F. Payne and Dr. J. J. Pringle, the latter of whom will be the acting editor. As these gentlemen will have the coöperation of Mr. Jonathan Hutchinson, Dr. Robert Liveing, Dr. McCall Anderson, Dr. Allan Jamieson and Dr. Walter G. Smith, it will be thoroughly representative of British dermatology.

## ABSTRACTS, EXTRACTS, AND ANNOTATIONS.

## SURGERY.

## ON THE COAGULATION OF THE BLOOD IN ITS PRACTICAL ASPECTS.

THE ANNUAL ORATION TO THE MEDICAL SOCIETY OF LONDON,  
DELIVERED MAY 4, 1891.

By Sir JOSEPH LISTER, Bart., F. R. S., Professor of Clinical Surgery in King's College, London.

MR. PRESIDENT AND GENTLEMEN—Thirty years ago Dr. Alexander Schmidt, of Dorpat, enunciated a totally new view of the coagulation of the blood. Having rediscovered the fact observed many years before by Dr. Andrew Buchanan, of Glasgow, that hydrocele fluid—uncoagulable in itself—is made to coagulate by the addition to it of the serum of blood already coagulated, and pursuing extended researches in the line thus indicated, he came to the conclusion that fibrin does not exist as such in solution in the plasma, but is composed of two albuminoid substances, one present in the liquor sanguinis, to which he gave the name of fibrinogen, and the other a constituent of the blood corpuscles, and this he termed the fibrinoplastic substance.

It might be objected to Professor Schmidt that the hydrocele fluid and the various dropsical effusions with which he had worked were not fairly comparable to liquor sanguinis; that they were transudations through the walls of vessels, and that the liquor sanguinis might have become in one way or another altered in the process of transudation. This objection was, as I believe, removed by an observation made by myself about the same period. It had fallen to my lot to observe that in mammalia, whereas the blood usually coagulates soon after death in the heart and in the main vascular trunks, in the secondary vessels it remains fluid for an indefinite period, and that not only in those of small calibre, but, if the animal be large, in large vessels also. This being understood, I proceeded as follows: Having removed a portion of the jugular vein of a horse with the blood contained in it, between two ligatures, I suspended this segment of a vein in a vertical position. In the blood of a horse, the red corpuscles behave in a totally different manner as regards their aggregation from those of a healthy man or of the ox. In the horse, instead of the red corpuscles assuming the con-



dition of a delicate network of rouleaux, they become aggregated into dense spherical masses, often visible to the naked eye, like coarse grains of sand; and these densely aggregated corpuscles, falling more quickly than the rouleaux in the liquor sanguinis, as hailstones fall more rapidly than snow flakes, soon leave the upper part of the fluid comparatively free from corpuscles; so that within about half an hour the upper third, or it may be half, of the blood is a transparent liquid. When I had ascertained through the translucent walls of the vein that this state of things had occurred, I punctured the upper part of the vessel, so as to let out some of the clear fluid, and found that it was very slow in coagulating. In about three quarters of an hour it had only begun to coagulate, whereas a little of this same clear fluid, to which a small portion of coagulated blood was added, clotted in a very short period. That the clear fluid did coagulate at all was sufficiently explained by microscopical examination, which showed that there were present in it some red corpuscles and numerous white corpuscles. It was obvious that if we could have separated the corpuscles absolutely from the liquor sanguinis, there would have been no coagulation at all; and as the separation of the corpuscles from the plasma had occurred, not by transudation through vascular walls, but simply as the result of gravity, it could be no longer doubted that Schmidt's conclusions were essentially right.

During the time that has since elapsed various endeavors have been made to ascertain the precise nature and mutual relations of the constituents of the liquor sanguinis and the corpuscles thus concerned in the formation of the fibrin. This inquiry can not be said to be yet terminated, and it is, at the present time, uncertain whether Schmidt's simple original view may not be correct, that there are two albuminoid substances, one in the plasma and one in the corpuscles, which combine to constitute fibrin.

These investigations, most valuable as they are, have as it seems to me, somewhat overshadowed the question, which is after all the most interesting to us as practitioners, namely: What are the circumstances that determine the mutual reaction of these two constituents? What are the conditions under which the corpuscles are induced to give up their element of the fibrin, to combine with the element in the liquor sanguinis? This subject engaged a large share of my attention many years ago; and, though I am afraid I have not much of novelty to communicate regarding it, yet in consequence of its very great importance, I have thought that it might perhaps be not unworthy of the circumstances in which the kindness of your Council has placed me this evening.

Shortly before my investigation began, Professor Brucke, of Vienna, had conducted an inquiry into the conditions which determine coagulation, and had arrived at conclusions which to a certain extent resembled those to which I was led. He found, as also I did, that there is a world-wide difference, in their relations toward the blood, between the walls of the living vessels and ordinary solid matter; and Brucke concluded, as Sir Astley Cooper and others had done before him, that this difference consisted in an active state of the living vessels; that the blood vessels, by an action which they exerted upon the blood, prevented it from coagulating. My investigations, on the other hand, led me to conclude that healthy blood has no spontaneous tendency to coagulate, and that the walls of the blood vessels are not active, as Brucke supposed, but passive in their relation to coagulation; that ordinary solids induce coagulation by an attractive influence—comparable, perhaps, to that which a thread exerts in causing the deposition of sugar candy from a solution of sugar—while the healthy living tissues differ from ordinary solids in being destitute of this attractive influence.

Out of many experiments tending to this inference, published long ago, I may be permitted again to describe one which not only appears to me conclusive on the point at issue, but is also of interest otherwise. A portion of the jugular vein of an ox with the blood in it being held vertically, I cut off the upper end, taking scrupulous care that the wounded part of the vessel did not come in contact with the blood, and then passed down into the vein a tube composed of very thin glass of a calibre rather less than that of the jugular vein, its upper end being stopped by a perforated cork, in which was inserted a narrow glass tube, which again was continued with a short piece of vulcanized india rubber tubing. The tube was pressed with the utmost steadiness down into the vein, so as to disturb the blood as little as possible. In the course of time, the vein being a little squeezed, blood made its appearance in the narrow glass tube, and then at the end of the india rubber tube. When this was the case, the india rubber tube was secured by a clamp, and the whole apparatus was rapidly inverted, and the piece of vein withdrawn. Waterproof tissue was then tied over the open end of the large tube to prevent evaporation and exclude dust, and the tube was securely fixed and left undisturbed. Thus we had blood present in a vessel consisting entirely of ordinary solid matter, but having been subjected in a minimum degree to the influence of the ordinary solids; and the result was that when I came to examine the blood after the lapse of ten hours, I found it still fluid, with

the exception of a crust of clot lining the wall of the glass vessel. This, gentlemen, seemed to me of itself to afford sufficient evidence that healthy blood has no spontaneous tendency to coagulate, requiring to be kept in check by an action on the part of the walls of the living vessels. This blood had been entirely withdrawn from the vein, and yet it remained fluid except where in contact with the ordinary solid.

This conclusion has been comparatively lately strikingly confirmed by the experiments of more than one observer. I would especially allude to one performed by Professor Berry Haycraft. He has found that if a drop of blood is introduced, under suitable precautions, into a deep narrow jar of castor oil, and before the drop, which falls slowly through this oil, has reached the bottom of the vessel, the jar is inverted and the drop made to retrace its steps without having touched the glass, this process being repeated again and again, the drop of blood, having never come in contact with an ordinary solid, remains fluid for an indefinite period. This experiment may perhaps appear to some of you even more conclusive than mine, inasmuch as no coagulation whatsoever occurs in the drop of blood under these circumstances. Certainly it seems to me that it confirms in an absolutely unmistakable manner the view to which I had been previously led.

But there is also this interesting circumstance in Professor Haycraft's observation. It had been shown amply by myself that the gases of the atmosphere are incapable of inducing coagulation of the blood; but experiments like those of Professor Haycraft show that the same is the case with neutral or chemically indifferent liquids. This seems to me to be an exceedingly interesting fact, namely, that the active living tissue, such as lines the wall of a healthy vessel, in its relation to the coagulation of the blood resembles the mobile particles of a liquid. I say the *active* living tissue, for when the living tissue becomes impaired in vital energy it behaves toward the blood like an ordinary solid. That is the case not only when a vessel is wounded, but also when it is subjected to some influence which without actually wounding it is calculated to suspend or impair its vital activity. A good illustration of this is afforded by a fact which I have never before referred to, but which I have often noticed. A very valuable field for simple and instructive observations regarding the conditions that determine the coagulation of the blood was afforded by the feet of sheep, removed after the animals had been killed, the blood being retained in the vessels by a bandage applied below the part where



the foot is removed by the butcher. The blood remains fluid for days in the veins of such feet, while at the same time the persistent vitality of the vessels is shown by the fact that they contract when exposed by reflexion of the skin. Now it happened that the butcher, in order to keep the sheep from struggling, always tied the feet together with a firm cord applied below the part where my bandage for retaining the blood was passed round; and I invariably found the blood coagulated in the superficial veins at the part where they had been pinched between the cord and the bone. There is no reason to suppose that the temporary application of the cord had deprived the veins of their vitality at the part subjected to its pressure. If the sheep had been released, I have no doubt whatever that the veins would have remained alive. But though the vessels had not been wounded, but only squeezed, only had their vital energies temporarily impaired, nevertheless the blood had coagulated in them at the part so treated. Just as by pinching a portion of the web of a frog's foot with the padded ends of a pair of dressing forceps you can induce, if you press hard enough, a degree of intense inflammatory congestion by which the pigment cells for the time being have their vital functions of diffusion and concentration of the pigment perfectly suspended, and yet are in a condition which is recoverable, so had these veins been subjected to an agency—the pinching by the cord—which did not actually wound them, but merely impaired or suspended for the time being their vital power. Thus it appears that the living tissues, which, while in a healthy active state, differ from ordinary solids in not occasioning the coagulation of the blood, when lowered in their vital power, themselves act like ordinary solids, and induce coagulation.

Another point to which my investigations were at that time directed was the behavior of the blood-clot in relation to coagulation. I came to the conclusion that an undisturbed coagulum resembles living tissue in its behavior with regard to coagulation; that an undisturbed clot does not induce coagulation in its vicinity—a most important truth if it be such. This is well illustrated by the fact with regard to the sheep's foot, to which I have already referred. We have seen that, on the one hand, where the tight cord had pressed the veins, coagulation occurred in those veins, but on the other hand that the blood remained permanently fluid in other parts of the same vessels. In other words, the clot induced by the action of the cord upon the veins had not been able to spread, although the blood in the veins was perfectly at rest; the clot could not propagate in itself. The same thing is seen in any

amputated limb in which the blood vessels are sound. If such a limb is examined, say twenty-four hours after amputation, you will find that there exist clots in the vessels where they were wounded by the knife in the operation, but that elsewhere the blood remains fluid and coagulable. I came therefore to the conclusion that an undisturbed blood-clot is unable to induce coagulation in its vicinity; and I think that the instances I have given demonstrate that such is really the case.

Yet in the experiment which I have described, where a glass tube was slipped down into the jugular vein, the coagulum did propagate itself. I found, on examining such a tube ten hours after it had been charged with blood, that the crust of clot which lined the tube was only a thin one; but in another experiment, nearly two days having been allowed to pass before examination, the clot was thick, and there remained only a small channel in the middle of it, with the blood still fluid and coagulable. How is this difference of behavior between the clot within the vessels and the clot outside them to be explained? At the time when I performed the experiment I was disposed to think that it must be due to some imperfection in the mode of performing it; that in spite of all the care that I had taken in very steadily pressing down the very thin glass tube, nevertheless the blood must have been influenced by the glass for some considerable distance.

I am now inclined to believe that another explanation must be given. It was ascertained by Schmidt that (to adopt provisionally his original nomenclature) the fibrinoplastic substance emitted by the corpuscles is greatly in excess of what is required in order to combine with the fibrinogen of the liquor sanguinis. This, in fact, is obvious from the fundamental truth that serum expressed from a shrinking clot, when added to hydrocele fluid, induces coagulation. The blood is coagulated already; the fibrin is already formed in it; and yet the serum contains fibrinoplastic substance in solution free to combine with the fibrinogen of the hydrocele fluid. Such being the case, we can readily understand that, in the experiment with the glass tube, the clot first formed, shrinking, squeezes out a little of its serum containing fibrinoplastic substance, and this, combining with the fibrinogen of the adjacent liquor sanguinis, fresh fibrin is formed, and the clot goes on perpetuating itself indefinitely, however slowly.

But how are we to explain the non-extension of the clot within the vessels in the cases referred to? how are we to explain the fact that it did not spread from the vicinity of the tight cord in the sheep's foot, and does not extend beyond the vicinity of the wound in the amputated limb? Again,

why is it [that the coagulum never propagates itself from the wound in the vein after phlebotomy? That wound—intentionally made somewhat gaping—is certainly, in the first instance, occupied by blood-clot. The equable flow of the venous blood does not disturb it. It is an undisturbed coagulum. But it must often happen that the clot projects more or less into the calibre of the vessel, in which case the blood, at its lee side, will lie at rest in contact with it. Yet the indefinite extension of the coagulum, which the analogy of the blood in the glass tube would lead us to anticipate, never occurs; and we reckon with confidence on the wound in the vein simply healing without interference with its calibre.

These remarkable differences between the behavior of a coagulum in a glass tube and within the living vessels may, perhaps, have light thrown upon them by a fact which I have on a previous occasion brought before the attention of this society. I first observed it, eighteen years ago, in an attempt that I made to obtain pure blood-serum from a horse; letting blood, with antiseptic precautions, from the carotid artery into a flask that had been purified by heating it to a very high temperature. To my great astonishment I found that, although the blood of the horse coagulated as usual in the flask, the clot did not shrink in the least. Though I kept it for many days, yet there was not a drop of serum to be seen upon its surface, and the sides of the clot remained in contact with the wall of the flask. This was made particularly striking by the circumstance that masses of aggregated red corpuscles, resembling grains of sand, as before described, were to be seen touching the glass in the lower part of the buffy coat. This, I need hardly say, astonished me immensely; and I imagine it was the first time that a blood-clot was ever seen not to shrink and press out serum.

It seemed scarcely credible that this result could be due to the destruction of micro-organisms in the flask, although the heat had been applied for that purpose. It was suggested to me that perhaps it might arise from some physical change in the glass due to the very high temperature to which I had subjected it. It had been observed by Liebig that, whereas a supersaturated solution of sulphate of soda is, under ordinary circumstances, made to start into a crystalline mass by contact with a glass stirring rod, no such effect is produced by the rod if it is heated in the flame of a spirit lamp and allowed to cool; a result attributed by Liebig to some temporary physical change produced in the glass by the heat. Might it be, then, that the fibrin of the clot failed to shrink in consequence



of a different molecular arrangement assumed under the influence of the glass altered by heat? That view, however, has been exploded: because it has been proved, as illustrated by some striking experiments shown at a *conversazione* of the Royal Society some years ago by my colleague, Professor Thompson, that the cause of the crystallization of the supersaturated solution of sulphate of soda is not the contact with the glass as such, but the accidental presence on the glass of minute quantities of sulphates isomorphous with the sulphate of soda: and that the effect of the heat is to drive off the water of crystallization of those salts and make them no longer isomorphous with it, and, therefore, no longer able to induce the crystallization. And so a mystery in physics was cleared away, and made a very simple matter. Thus the suggested explanation fell to the ground.

The same absence of shrinking of the clot had been brought about by different means in the example which I exhibited to this society five years ago. A glass jar, not especially clean, had been purified by means of a solution of corrosive sublimate in 500 parts of water. Blood had been let into this jar from the jugular vein of a horse, under anti-septic precautions, forty-one days before; and the members of the society had the opportunity of seeing that, just as in the case of a flask subjected to a higher temperature, the clot had not shrunk; the serum had not been squeezed out of it. And although it seems unlikely that in the short time that elapses between the shedding of the blood and the commencement of shrinking of the clot under ordinary circumstances, the micro-organisms present could have had such an influence on the blood, yet when we see that two agencies so different in their nature as high temperature and a solution of corrosive sublimate, but both powerfully germicidal, led to the same result, one is almost inclined to think that surely it must be so. No other explanation has been offered, although I know that physiologists have been much interested in the subject.

If we admit that micro-organisms are the cause of the shrinking of the clot, it follows that a coagulum formed within the body under healthy conditions otherwise, being free from micro-organisms, will not shrink; and therefore that the clot, not squeezing out the serum, will not induce coagulation in its vicinity. Fibrinoplastic substance exists, no doubt, in the serum in the substance of the clot. But the experiments of the late Mr. Graham showed that diffusion of liquids is an exceedingly slow process, even between a strong saline solution and water; and it must be a very slow process indeed between two liquids so nearly allied as liquor sanguinis and serum. I

do not say that this is really the true explanation, but it seems to harmonize with the facts.

While an undisturbed clot resembles healthy and active living tissue with respect to coagulation, an injured clot acts in this relation like wounded tissue. And as a coagulum is an exceedingly lacerable and very easily injured substance, we often see coagulation induced by a blood-clot that has been disturbed. This is perhaps most strikingly seen in aneurism. Let us take, for instance, a traumatic aneurism. The blood escapes from the wounded artery into the surrounding tissues; and these having been injured, the blood coagulates in contact with them. Every successive portion of blood driven in by the force of the ventricle stretches and lacerates the clot so formed. It is an injured clot, and induces coagulation in its vicinity; and the result comes to be that while, on the one hand, the force of the heart tends perpetually to distend the sac, inferior as it is in elasticity to the wall of the artery, there is on the other hand a constant tendency to deposition of fibrin upon the interior of the sac as if the blood were "whipped," and thus the wall of the sac is perpetually strengthened, exhibiting a counteracting agency tending to recovery.

A beautiful converse of this state of things is presented, as it seems to me, by some cases of varicose aneurism, such as used to be a not uncommon result of careless venesection. Here the communication with the vein was sometimes so free that the blood driven in by the heart distended the sac comparatively little, so that the aneurysm had no tendency to increase, but was merely a source of annoyance from the purring sensation caused by the arterial blood driven into the vein. And if an operation was performed on such a case, the remarkable fact was disclosed that instead of the aneurysmal sac being lined with layers of fibrin, it resembled in its interior an artery or a vein. The force of the blood not being able to tell upon the clot and injure it, the clot ceased to induce further coagulation, and became organized and invested with endothelium.

We see the same thing illustrated in the different behavior of the blood clot above and below a ligature applied upon an artery in its continuity. When such a ligature was applied in the old-fashioned way, in the shape of a silk thread, used without any antiseptic precautions, with the ends left long, it had to come away by suppuration, and there was serious danger of secondary hemorrhage. But if this did occur, it was commonly not, as might have been expected, from the cardiac side, where the seat of ligature was subjected to the full force of the ventricular contractions, but from the

distal side, where the pressure was comparatively feeble. The ligature having been applied sufficiently tightly to rupture the internal and middle coats, there necessarily occurred as an immediate result a certain limited amount of coagulation upon the injured tissues. On the cardiac side, where the force of the blood driven by the heart against the obstruction told powerfully at every stroke, the clot was perpetually disturbed, and infallibly coagulation occurred up to the first considerable branch, that carried the stream away and made further coagulation impossible. But at the distal side, if the circumstances of the anastomosing circulation were such that there was no pulsation, there might be no extension whatever of the undisturbed primary coagulum, so that a mere trace of clot was found on pathological examination.

I have hitherto referred to the view first advanced by myself and now, I believe, generally accepted—that the fluidity of the blood is not due to active operation of the living vessels. But I am far from holding the opinion that there is no part of the vascular system that actively opposes coagulation. If transfusion is practised in the ordinary manner—say by filling a syringe with blood and injecting it into the vessels of the patient—the blood is subjected to the influence of an ordinary solid, which would inevitably induce coagulation within the vessels, unless there were some counteracting influence at work. It is astonishing how very short a period of contact with an ordinary solid determines the mutual reaction of the corpuscles and the liquor sanguinis. Yet no coagulation occurs as the result of such an operation. It is, I presume, in the capillary system that the correcting influence is exerted.

Again when intense inflammatory congestion is produced by the application of some irritant substance to the web of a frog's foot, we see that the corpuscles, both red and white, adhere to one another and to the walls of the vessels and block the capillaries. Mechanical violence is one of the many irritating agencies which produce such congestion; and from what we know of the effects of the pressure of the cord upon the vessels of the sheep's foot, we can not doubt that the blood must be coagulated in the congested vessels; that between the corpuscles there must be cementing fibrin. The distinguishing characteristic of acute inflammatory exudation is of itself pretty clear evidence to this effect. The exudations in intense inflammation differ from those of dropsy by being coagulable; hence the brawniness of tissues that are intensely inflamed, or the lymph in acute pericarditis. How can this coagulable character of the effused liquor sanguinis be explained except by supposing that the walls of the capillaries have acted for



the time being like ordinary solid matter, and that, as a consequence of this behavior of the capillaries, the corpuscles have given up to the liquor sanguinis (to use Schmidt's language) the necessary fibrinoplastic substance? And if the exuded liquor sanguinis coagulates, we can not doubt but the plasma which remains in the capillaries is also coagulated. Nevertheless, if the irritant has not been pushed so far as to cause the death of the part on which it has acted, the tissues in due time recover, and we see the corpuscles gradually detaching themselves from each other, to pass on into the circulation. And we may surely say that, not only do the corpuscles recover their original non-adhesive character, but the fibrin which binds them together is redissolved.

I believe, therefore, that although in the larger vessels the vascular walls are negative as regards the coagulation of the blood, in the capillary system there must be potent agencies counteracting any tendency to clotting induced by abnormal conditions and capable even of redissolving fibrin.— *British Medical Journal*.

#### SYMPTOMS AND TREATMENT OF INTOLERABLE FISSURE OF THE ANUS.

Lecture of M. Duplay, in the Hopital de la Charite, Paris.

You have perhaps noticed in our ward a young man of 25, of a robust appearance, who sometimes seems to enjoy perfect health, and sometimes groans and writhes in his bed, complaining of the most violent pains in the region of the anus. These pains are of a character which of itself suffices to diagnose the disease. While defecating, the patient, who is usually constipated, feels a sudden pain; it seems as though a red-hot knife passed through his rectum. But this pain, though rather severe, is not intolerable and quickly subsides. In about a quarter or half an hour after defecation, however, atrocious pains come on, which cause him to cry out in anguish; these pains may last four, five or six hours.

With these facts before us, the diagnosis of fissure of the anus is easy. If, now, we examine the patient in a convenient position, we will find at the posterior margin of the anus, in the median line, a small ulcer. This lesion is a very small affair; it is merely an elongated fissure, not deep, not roughened, not oozing, and with the edges scarcely indurated. But it is only necessary to touch it in order to cause violent pain.

Rectal examination reveals another important fact to explain the pains: the contraction of the sphincter. This exam

ination is very painful; quite an effort is required to overcome the resistance of the sphincter. Upon seizing the sphincter between the thumb and index finger, there is a sensation as of a ring of extreme hardness. This spasmodic contraction seems to be the principal cause of the great pain and sufferings in this disease; whence the name *fissural sphincteralgia* that was proposed for it.

This contraction is often caused by extremely small fissures, by a simple hemorrhoidal ulceration, or by a simple eczematous erosion. On the other hand, it is remarkable that syphilitic, tubercular or epitheliomatous ulcers never give rise to it. The pain and contraction, though very distressing, are still very reassuring in regard to general prognosis.

Fissures resulting from hemorrhoids or eczema may also exist without severe pain or spasm of the sphincter. Gosseline has described this form under the name of *fissure tolérante*, in contradistinction to the intolerably painful fissures. In the tolerable fissures, the patient feels a smarting pain at the time of defecation, but this smarting is only momentary. The co-existence of syphilis or tuberculosis may then be thought about; but the appearance of the fissure and the non-intensity of the lesion scarcely leave any room for doubt.

In regard to treatment, it is essential to distinguish between the two forms of the disease. In the tolerable form, sitz-baths, washes and various ointments quickly bring about a cure, especially if constipation be avoided. On the other hand, dilation of the anus, which is of such marvelous efficacy in the intolerable form, is not of the slightest use in the mild form.

In intolerable fissures, all other measures besides dilatation are perfectly useless. Some time ago I saw a foreign young woman who had been treated in vain for two years for fissure of the anus, with all sorts of medicines; topical applications of many kinds, mineral waters, cauterizations, excision of hemorrhoids, but all to no effect. Dilatation of the sphincter gave her relief in a few hours.

In performing this painful operation, I employ anæsthesia by chloroform; I am afraid of interstitial injections of cocaine, especially in this region, which have been recommended. The only preliminary step necessary is to empty the rectum by a gentle purgative, given the day before the operation; a light diet and an enema before operating. The patient lies on his side, the lower leg being extended and the upper one flexed and the buttock raised by an assistant. I perform the dilatation by introducing the two index fingers into the rectum, and using the thumbs only when the resistance is very great. I

never use a dilating speculum. It is necessary to avoid a blind and brutal dilatation: we should, above all, avoid the practice which recommends that the thumbs be separated until they touch the ischia. We should dilate until we feel that the resistance of the sphincter has been overcome, but we should not go beyond that: at the same time the fissure should be watched so as to see that no tearing takes place. Tearing of the fissure, and even of the sphincter, which often happens when a dilating speculum is used, is not a very serious accident, but it is worth avoiding.

The after treatment in cases of dilatation is almost nothing. If the fissure be slightly torn, an ointment containing iodoform might be used.

Relief is usually very prompt, almost immediate. However, you must bear in mind that in hemorrhoidal subjects, if the pain from the fissure ceases in a day or two after the operation, it is frequently replaced for about a week by another pain, due to the turgescence of the hemorrhoidal plexus following the traumatism. It is well to remember the possibility of such an incident.

Failures are very rare. I have seen only one, in a neuro-pathic young man not hemorrhoidal. In such a case, division of the sphincter would result in cure. The line of incision should be through the fissure, and the whole thickness of the muscle should be divided. The thermocautery should be used to divide the sphincter. Cicatrization is a little slower than after the use of the bistoury, but you avoid troublesome hemorrhage, and you also diminish the risks of infection. Division of the sphincter causes incontinence of feces, but this does not last long.—*Gazette des Hôpitaux*.

#### OPERATION FOR RADICAL CURE OF SCROTAL HERNIA—TENOTOMY FOR TALIPES EQUINUS.\*

BY ERNEST LAPLACE M. D., Professor of Pathology and Clinical Surgery in the Medico-Chirurgical College; Visiting Surgeon to the Philadelphia Hospital, etc.

*Gentlemen:* The first case I show you this morning is one of the greatest importance. It is one in which I shall perform an operation for the radical cure of hernia. This hernia is of the scrotal variety, and the operation will consist in cutting down to the sac—or into the sac if necessary—investigating matters to ascertain if there be any adhesions; if none, so much the better; in reducing the hernia; in dissecting the sac from the tissues of the scrotum, passing a ligature around its neck and removing the excess of the sac below, obliterat-

\* Delivered at the Philadelphia Hospital.



ing in this way its cavity: and finally in treating the case antiseptically. Now, what are the dangers connected with such an operation? In any operation for hernia we should first think of the epigastric artery. In this case the artery is internal to the hernia. I will not cut among the inguinal ring, however, and will, therefore, run no danger of injuring it in this operation. The sac of the hernia is absolutely nothing else than the peritoneum which has been pushed down in front of the descending intestines. It is, therefore, an acquired scrotal hernia.

What is the difference between an acquired and a congenital scrotal hernia? A congenital scrotal hernia has no special containing sac whatever, the intestine passing directly down into the tunica vaginalis testis. In the acquired form, however, the intestine pushes the true peritoneum in front of it, and then, in addition to the tunica vaginalis testis, we have this other peritoneal investment.

There are cases in which we should be prudent and cautious in our antiseptic measures. In this case you will notice that I am not going to be antiseptic, but aseptic. I will be cautious in removing all germs from around the patient, so that not being any there will be no use in endeavoring to destroy germs by antiseptics. Antisepsis is but the stepping-stone to asepsis. This is the reason why Lawson Tait, in a measure, decries antisepsis. He is careful in the preparation and treatment of his cases, that he has killed all germs, and needs no antisepsis but scrupulous cleanliness. The instruments which I shall use have been sterilized over night, so that it will not be necessary to use carbolic acid now. This cotton has also been sterilized, and I shall use it for sponging purposes. The patient has been thoroughly washed, first with soap and water, then with ether, and finally with a sublimate solution, and a towel dipped in the sublimate has been left on his scrotum over night.

The first thing to do here is to reduce the hernia. This I have now done, and my fingers are in the inguinal ring. The internal and external rings are in opposition here, the inguinal canal being virtually destroyed. I will now cut directly into the scrotum, and if I can dissect out the sac without opening it, so much the better. I am only using here water which has been boiled and then allowed to become lukewarm, but without the addition of any sublimate or carbolic acid. The inguinal ring is so large and stretched that the hernia readily slips out. I am now upon the sac, which I can recognize by its smooth, glistening appearance.

By dissecting up all adhesions I am able now to circum-

scribe the membrane as it emerges from the inguinal ring. The hernia being reduced and the sac empty, I have nothing now to do but to pass the ligature around it, first ascertaining that the cord and testicle are pushed well back and not included in the ligature. Having now tied my ligature, I will not remove the sac, since it is completely obliterated, and care has been taken to avoid any infection of the wound. I inject into the tissues some 10 per cent. solution of iodoform in ether to irritate the parts a little, kill any germs which may be present, and secure union by first intention. Inserting a drainage tube, I close the wound in the scrotum with a continuous suture, and put over it a sterilized dressing.

The next case I wish to show you is one of talipes equinus. This condition, like the other forms of club-foot, may be either hereditary or acquired. The etiology of this disease is not known. Some forms of club-foot are due to an irregular development of the astragalus. We thus have produced the forms of talipes varus and valgus. But in talipes equinus, where there is a shortening of the tendo-achilles, the direct cause of the trouble has not been found out. In this operation of severing of the tendon by subcutaneous tenotomy, scrupulous cleanliness is also needed as in the former case. It was through this class of operations that attention was first directed toward the need of antiseptic precautions in surgical procedures. It was noticed that all of these cases of subcutaneous surgery proceeded rapidly toward a cure without any suppuration at all, while all open wounds passed through a period of suppuration. It was formerly believed that an open wound necessitated the so-called "laudable pus," but it is now recognized that if germs from the air or elsewhere be kept from a wound all suppuration may be prevented.

In performing tenotomy it is necessary that we know the underlying structures. We can bring the tendon boldly into relief by stretching the foot. Then with the edge of our tenatome directed outward, or to the side of the foot, we insert it along the line of the tendon and cut out until the tendon snaps. Over the point of puncture we apply a little iodoform gauze, and then put on a permanent dressing. If we did not do this, the tendency would be to have a return of the original condition, for the tendon is a living tissue, and granulations will be thrown out, fibrous tissue formed, and a cicatrix result, uniting the two ends and causing a return of the condition. By stretching the foot, the contraction will be prevented, and the deformity remedied. In putting on a plaster of Paris dressing, let me call your attention to the absolute necessity of there being a good layer of cotton over the foot. Otherwise, pain

will result from the pressure due to the swelling. By putting on the cotton we allow for this swelling. Most of the dressing should be applied around the ankle-joint, in order to maintain a continued flexed condition of the joint.—*Times and Register*.

#### ANOMALIES OF THE FEMALE SEXUAL ORGANS.

The moral advantages of a double vagina: As health officer the author was examining a woman of the town, but, after passing the speculum, could see nothing of the uterus, although its existence had been proved by the birth of two children. Noticing his perplexity the patient, a lively young Frenchwoman, said, with utmost nonchalance: "You won't find what you are looking for down there, señor; I have two passages with one entrance, and you have taken the wrong turning—permit me." A little manœuvre, and there was the *os* plainly enough! A more exact examination showed that she had a double vagina, the septum a thin lax membrane, with which she could deftly shunt the speculum into a *cul-de-sac* or on the uterus at will. And, then, after entreating that her secret should not be disclosed, she explained with engaging frankness the advantages of this novel arrangement: "You should know there is a young fellow who adores me: for him I reserve the true passage. Do you think I would allow anyone else to enter there! No, señor, I respect myself too much. But the other is at the service of my friends: *there* they may innocently divert themselves as much as they please."

#### MEDICINE.

##### THE BACILLI OF MALARIA.

Dr. Andreas has recently published an interesting treatise on the comparative number of the bacilli of malaria in the air at different times of the day. His experiments, which were conducted in the Observatory of Moncalieri, and reported in the *Medicinische Neuigkeiten*, April 11, 1891, were carried out by means of small rubber balloons filled with hydrogen. On to these balloons he fastened a small box, holding prepared glass slides, which box he was able to open by means of a cord, after the balloon had reached the desired height. Microscopic examination of the slides showed that in the early hours of the day the swarms of bacteria were close to the



ground and in large numbers: later, at about 9 o'clock in the morning until about 3 in the afternoon, they would rise until they reached a considerable height, and from that time would again gradually sink to the ground. The number of bacilli in the air was almost exactly in proportion to the rise of temperature, while in direct opposition to the amount of humidity in the atmosphere. It is evident, therefore, that the condensation of the watery vapors in the air cause the falling of the bacilli, and for this reason the morning and evening hours are the most dangerous in malarial districts.—*Medical and Surgical Reporter*.

#### ACTION OF BILE ON THE FAT-SPLITTING PROPERTIES OF PANCREATIC JUICE.

The following is an abstract of a paper read at the Tenth International Medical Congress, Berlin, by Dr. B. K. Rachford, and printed in full in the *Journal of Physiology* (England) for April: The fat-splitting properties of pancreatic juice can best be studied by pipetting the oil, at intervals, from the surface of a mixture of oil and pancreatic juice and testing its emulsibility by the spontaneous-emulsion method of Gad.\* By this method I arrived at the following conclusions:

1. If pancreatic juice is shaken with neutral oil, the oil rapidly takes on an acid reaction and the acidity of the oil is due to the development of free fatty acid.

2. Fifteen minutes is the average time required for pancreatic juice to develop sufficient fatty acid to give the best spontaneous emulsion, and all the oil is split by the prolonged action of the juice.

3. If pancreatic juice is five times diluted with a  $\frac{1}{4}$  per cent. carbonate of soda solution its fat-splitting action will be greatly delayed, and by further dilution with the soda solution will be almost suspended.

4. If pancreatic juice is mixed with an equal quantity of a  $\frac{1}{4}$  per cent. solution of hydrochloric acid its fat-splitting properties will be retarded in the proportion of 2:3.

5. Bile alone does not split fats, but an equal quantity of bile will, on being mixed with pancreatic juice, hasten the fat-splitting properties of the juice as  $3\frac{1}{2}$ :1.

6. A mixture of equal quantities of bile and hydrochloric acid will, on being added in equal quantities to pancreatic juice, greatly hasten its fat-splitting action as  $4\frac{1}{2}$ :1.

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\*Archiv für Anatomie und Physiologie, 1878.

It follows from these observations that if pancreatic juice be acting in the presence of  $\frac{1}{4}$  per cent. solution of hydrochloric acid, the addition of bile will hasten its fat-splitting properties in the proportion of 7:1, and, since these conditions are probably very similar to those under which the bile and pancreatic juice act in the duodenum, I infer that in the duodenum the bile hastens the fat-splitting action of pancreatic juice as 7:1, and therefore has an important influence on the intestinal digestion of fats. And the importance of this influence is the more evident when we remember that the alkaline intestinal juice furnishes the proper conditions not only for the emulsification of the rancid fats, but also for checking the fat-splitting action of the pancreatic juice.—*Archiv. für Anatomie und Physiologie*.—*Journal of the Medical College of Ohio*.

#### THE ACTION OF HYDRASTIN UPON THE VASCULAR SYSTEM AND THE UTERUS.

Authorities are divided upon the mode of the action of hydrastin on the vascular system. Some have observed an increased blood-pressure and slowing of the heart's action, whilst others affirm that the drug paralyzes the vascular system. The uterine contractions provoked by hydrastin are due, according to some, to the direct stimulation of the muscles and of the cardiac nerves; according to others, to the stimulation of the central nervous system. It was for this reason that Serdsteff had undertaken new experimental researches upon frogs (sixty-two experiments) and upon warm-blooded animals (fifty-seven experiments). These are the results obtained by this experimenter:

Given in a small dose hydrastin provoked, in frogs and in warm-blooded animals, slowing of the heart's movements, owing to a stimulation of the inhibitory apparatus, both peripheral and central. Small doses always increased blood-pressure; by larger doses it was lowered.

These differences depended upon the state of the vasomotor center. Small doses were not followed by convulsions, and did not paralyze either the respiration or the heart. He thinks, then, that if some observers have verified the paralyzing action of hydrastin upon the vascular system, it must be those who have given larger doses of the remedy. Regarding the influence exercised by hydrastin upon the uterus, the voluntary or rhythmic contractions of this organ would be increased in their strength, their number, and their duration.

Hydrastin does not act *directly* upon the neuro-muscular apparatus of the uterus, but *indirectly* by the intervention of the central nervous system, and that very probably by way of the vasomotors.

In sustaining these obtained results the experimenter counsels the use of hydrastin in all those cases of hemorrhage where it would be, for one cause or another, unwise to await strong contractions of the uterine muscles, and where it is of the greatest importance to attack the bleeding through the vessels of the uterus.—*Les Nouveaux Remedes.—Medical and Surgical Reporter.*

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#### CONTRIBUTION TO THE STUDY OF GALVANO-PUNCTURE IN THE TREATMENT OF ENLARGED TONSILS IN INFANTS.

Thesis of M. P. TERSON.

The author advocates galvano-puncture, and rejects tonsilotomy almost entirely. According to him, galvano-puncture is a simple and easy operation, and not painful.

The number of applications necessary to destroy the tumors with the galvano-cautery is usually four, often less.

There is only one contraindication to galvano-puncture, and that is the indocility of very young children. The galvano-cautery is preferable to the thermo-cautery, which has no special advantages and has several disadvantages.—*Gazette des Hopitaux.*

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#### OBSTETRICS.

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#### CASE OF SUDDEN AND UNEXPECTED DELIVERY IN THE ERECT POSTURE.

E. HUGH SNELL, M. B., B. Sc., London.

There being only a limited number of cases of sudden and unexpected delivery in the erect posture on record the following case is perhaps worthy of mention:

S. D., aged 21, who had previously, after a lingering labor, given birth to one child, was recently visiting a friend, when she felt a sensation of giddiness. She therefore left and started on her way home. Having walked fifty yards a sudden pain in the abdomen was experienced; the pain was so acute



that she retired to a neighboring outhouse. She had no sooner arrived there than she gave birth to a full term male child. The child fell head foremost on to the stone floor. The fall was broken by the cord, the cord was ruptured, and no hemorrhage occurred; the child sustained no injury, not even a bruise being apparent, and is still alive (two months after the occurrence). The mother walked back to her friend's house, and has made a good recovery.

There had been a miscalculation of two months in this case of the probable date of parturition, and the mother had no idea of the cause of the pain until the child fell from her.

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#### PUTREFIED MILK IN THE BREAST.

Jorissenne reports a rare and curious case which occurred in his practice during the year 1874, and which, for want of an explanation or any comparison with a case more or less analogous, he had refrained from publishing hitherto. The facts of the case are as follows:

Mrs. P. V. was delivered with the aid of forceps on the 5th of October, 1874. The sequelæ were normal and she had regularly nursed her child. Of a rather delicate constitution, small, pale with flushed cheeks, of a lymphatic temperament, possibly not without tuberculous taint (although still living and with less pathological appearances than formerly), she was a good specimen of a blonde. Her child was well developed, but in 1875 it suffered with the milk-crust. On the 7th of December she took a short trip and remained away about seven hours and a half. On her return she hastened to give it its nourishment, and it suckled eagerly. A fœtid odor, however, disseminated itself with the milk. The husband and other members of the family left the room, compelled to hold the nose. It was, they said, intolerable: a sulphurous and extremely offensive odor, resembling putrid eggs, with a mixture of sour acidity.

The mother herself became ill from breathing these disgusting emanations, and the child vomited some time later. Jorissenne did not see the patient until the next day, at which time none of the sheets soiled by the vomited food retained the foul odor. The patient did not at that time seem to be suffering any ill effects from the trouble of the previous day. The breasts did not present any fissure nor any trace of engorgement; the milk was no longer odorous. On questioning, it was learned that the milk had remained three times as long

as ordinarily in the glands, without occasioning any difficulty, even moderate in amount. The two breasts, nevertheless, had contained vitiated milk. The woman also confessed that several times her milk had begun to become offensive, but to a less degree, when the interval between the nursings had been too considerable. It is necessary to add that her trip had been rapid and fatiguing. An hour of carriage-riding and five hours and a half of rapid walking had been broken by only an hour's rest at the table. This, however, will not explain the peculiar odor of this putrefaction. Whence came the germ of decomposition? At the time none of the milk was preserved to ascertain if, upon becoming putrid, it would give rise to phenomena analogous to those of the first occasion.

The conduct of the child is no less of interest than were the heteroclite alterations in the mother. It sucked the infected milk with the same avidity it evinced when swallowing the nutriment in its normal condition. There was no evidence of repugnance on its part, no hesitation, no unusual interruptions. Neither the taste nor the odor caused it to reject the food. The odor of the milk was beyond doubt, since all who were in the room were compelled to beat a hasty retreat. The child, however, was unaffected. It is fair to conclude that the sense of smell in an infant is but slightly, if at all, developed. It can hardly be believed that milk possessed of such an odor should be sweet and agreeable to the taste. It is probable that the savor was associated with some alteration in the taste, the sour acidity which was noticed probably indicating such a change. Various experiments have shown that the sense of taste perfects or develops itself with age. It is, therefore, probable that the ability to discriminate between the taste of pure and tainted milk was but poorly developed in this child, probably to no further extent than was the sense of smell. The perception of exceptional odors in the alimentation of early age is certainly obscure, indistinct, or even *nil*. The iodide of sodium or of potassium has been frequently administered to the newborn without concealing the bitter, salty taste, by the use of some agreeable syrup, and without any show of repugnance on the part of the child. Frequently will one see a child of five or six months suck toys which are covered with paints disagreeable to the taste. This is proof incontestable that there is not that acuteness of the sense of taste in these children that there is in older individuals. It is well known that olfactory sensations exert an influence upon the gustatory sensations. The absence in the power of smelling in this instance may have had a favorable influence upon the sense of taste.—*Archiv de Tocol. et de Gynécol.*, February, 1891.—*Medical News*.

## BOOK REVIEWS AND NOTICES.

*Text-Book of Medical Jurisprudence and Toxicology.* By John J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania; late President of the Medical Jurisprudence Society of Philadelphia; Honorary Member of the New York Academy of Anthropology; Corresponding Member of the New York Medico-Legal Society, etc. Philadelphia: P. Blakiston, Son & Co., 1891; New Orleans: Hawkins & Co. Price \$3.

The third edition of this work, revised and enlarged, comes to us, as did its predecessor, full of interest and reliable information. This is an exceedingly readable book; the writers quoted are authoritative; and the style simple and concise.

The new edition is slightly larger than the old, the changes consisting chiefly of brief sentences enlarging and explaining the text.

A third edition appearing so soon after the second speaks well for the popularity of the volume. H. W. B.

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NECROLOGY.

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DR. JOSEPH LEIDY.

On April 30, after a brief illness, passed away, Dr. Joseph Leidy, Professor of Anatomy and Zoölogy in the University of Pennsylvania—the most distinguished naturalist of America, a man whose lasting achievements secured the highest recognition throughout the entire scientific world, whose personal characteristics won the warmest affection of all who had the privilege of his friendship.

Joseph Leidy was born in Philadelphia, September 9, 1823. His inclination toward the study of natural history was early manifested, when, as a school boy, he secured text-books and began the study of mineralogy and botany, thereby laying the foundation of that immense store of knowledge, which his unaided efforts and ceaseless industry made his own. As a youth, he also displayed a remarkable facility for drawing, a talent which, in after years, rendered his scientific contributions conspicuous.



After several experiences, it was determined that he should adopt a profession, in which his devotion to the natural sciences—becoming ever more pronounced—would find opportunities for congenial employment; he, therefore, in 1840, entered upon the study of medicine, under the guidance of Drs. James McClintock and Paul B. Goddard, graduating from the Medical Department of the University of Pennsylvania in 1844. His thesis was an admirable essay on the “Comparative Anatomy of the Eye of Vertebrated Animals.”

During the years of his medical course, his favorite studies in the domain of more purely scientific biology were by no means neglected, for in the same year of his graduation, he contributed a brilliant chapter on the “Special Anatomy of the Terrestrial Molusks of the United States” to Binney’s monograph.

Immediately after receiving his degree, he became assistant to Prof. Hare, the distinguished occupant of the chair of Chemistry in the University of Pennsylvania at that time, thus already indicating the broadness of his scientific interests. In 1845, Dr. Leidy was appointed Prosector in Anatomy, thus beginning the services in the anatomical department of the University, which, with a slight interruption during the succeeding year when he was demonstrator in the Franklin Medical College, have terminated only with his death. As Horner’s successor, Dr. Leidy became, in May, 1853, professor of Anatomy in the University of Pennsylvania, to which chair that of Zoölogy and Comparative Anatomy was added a few years ago. In 1871, he became, likewise, professor of Natural History in Swarthmore College.

Three years after his graduation, “The Fossil Horse of America” appeared, the first of those paleontological contributions which were to make Leidy’s name known in all lands. The most important of these have been:

Ancient Fauna of Nebraska. 1853.

Memoir on the Extinct Sloth Tribe of North America. 1855.

Cretaceous Reptiles of the United States. 1865.

Extinct Mammalian Fauna of Dakota and Nebraska: together with a Synopsis of the Mammalian Remains of North America. 1869.

Contributions to the extinct Vertebrate Fauna of the Western Territories. 1873.

Description of Vertebrate Remains from the Phosphate Beds of South Carolina. 1877.

The preparations of these monumental works, however, by no means exhausted the industry of this indefatigable worker,

for his additional contributions during these same years were numerous and varied.

Among the first in this country to use the microscope as an instrument of scientific research, Prof. Leidy always delighted in studying the minute forms of life and the details of structure it alone revealed. Early in his career, his classic paper on "Researches on the Comparative Structure of the Liver" (1848), and other kindred contributions established his ability as an histologist.

The study of parasites also became a favorite field with this investigator, whose numerous discoveries, as recorded in the Proceedings of Academy of Natural Sciences of Philadelphia, bear testimony to the success with which his labors were attended. It is interesting to note that, in 1846, Dr. Leidy recorded the discovery of a species of trichina in the hog, and stated that it appeared to be identical with the trichina spiralis, which he had met with in the tissues of the human subject; later, this observation materially aided Leuckart in unraveling the relation between the parasite in man and in the hog. The appearance, in 1853, of the beautifully illustrated monograph, "Flora and Fauna within Living Animals," added a contribution of permanent value to the literature pertaining to microscopic parasites, to which its author subsequently made so many important additions.

The fondness for the study of the lowest forms of life, which had always been a source of never failing pleasure and recreation from the fatigues of more burdensome duties, led Dr. Leidy to undertake a systematic investigation of the forms found in this country. The results of this research appeared in the quarto volume, "The Fresh-water Rhizobods of North America," the splendid illustrations of which are the delight of every student. These plates, charming as they are, in many instances fall far short in reproducing the exquisite beauty of the original drawings from Leidy's skilful pencil and brush.

As teacher of anatomy in a great medical school—in which capacity not a few readers of the *Reporter* have profited by his learning, during the thirty-eight years that have elapsed since his accession to the chair—Dr. Leidy appreciated the burden imposed on the student by the useless complexity of nomenclature, as well as by the perpetuation of errors grown classic by the sanction of precedent. He, therefore, set about the preparation of a text-book which should describe the human body as he saw it, freed, as far as possible, from all cumbersome terms; in 1861 was published "An Elementary Text-book on Human Anatomy," which for clear-

ness and accuracy of description has never been surpassed; the second edition of the book (1890) even more fully justifies its favorable reception.

Some idea of the achievements of this life of ceaseless industry and untiring devotion to investigation may be had when it is learned that the published communications, of all kinds, number about one thousand. While Prof. Leidy's eminence as a great naturalist has been cheerfully accorded at home, foreign countries have not been tardy in expressing their appreciation of the valuable services he has rendered in the advancement of those fields in which he has labored, since the honors conferred upon him by learned bodies abroad include honorary membership in almost all the foreign societies of note devoted to the natural sciences.

The peer of the greatest, Leidy, together with such men as Owen and Huxley, Johann Muller and Agassiz, Koelliker and Henle, represented a generation of scientists almost past away—men, whose privilege it was to be of the vanguard of biology, to live in those golden days when, on every side, new discoveries rewarded the scrutiny of the keen investigators, whose minds, already richly stored by broad training, became the repository of an ever-widening insight into natural phenomena. Men, whose energies were engaged in mapping out the salient landmarks of their science, whose comprehensive field was all nature, and on whom the limitations of an age of specialties had not been exerted.

Great as our admiration and respect for the splendid scientific attainments of Dr. Leidy must always be, it was, however, the personality of the man that drew toward him the warmest regard of all who came within his influence. Who that learned to know him—majestic in his noble simplicity, unassuming in his greatness, approachable by all seeking knowledge, to whom the youngest student turned assured of a kindly reception, a patient ear, and sound advice: ever the last to allude to his own achievements, but fearlessly expressing his own honest beliefs when occasion demanded, devoting to science his entire life, not for his personal glory, but for the advancement of knowledge—could not fail to honor the man truly great and good! A nature to which petty jealousy and conventional circumlocution were alike unknown. A man whose tender heart and quick sympathies were overruled alone by his sense of duty, and by his absolute, unwavering devotion to the truth.—*Medical and Surgical Reporter*.



## MEDICAL ITEMS.

## DECLINE OF THE FRENCH.

The French political economists in discussing the vital statistics of their country as recently published express much apprehension. It is stated that never since 1870 has the marriage rate been so low as it was in 1889, in which year there was a decrease of 3900 in the number of marriages compared with those that were contracted in 1888. With respect to births, the decrease last year, compared with the preceding one, is put down at 2000.

Despite the fact that the country is richer in resources than most of its neighbors, the fact remains that the number of marriages goes on decreasing, and, in addition, there is a distinct inclination on the part of married couples to limit the number of children. This is more perceptible amongst the class that is called well off than amongst those in a humbler position; but the children born to poor parents are too often sent a few days after their birth to some distant part of the country, where they soon drop out of life. **There are also** statistics belonging to illegitimate births based upon the ratios of the different peoples of Europe, but though the analysis may be of interest, they seem in the main to be explained by the score of obstacles to matrimony, as inadequate means, or possibly parental opposition.

As it is, the individual exalts himself above all community interests or moral considerations in thwarting nature by preventive means, or a resort to abortion outright. Such crimes being secret are of course well guarded, but as every physician suspects their practice is widely spread. The penalty falls upon the race in its being displaced by a more prolific one, and finally the catastrophe of utter extinction ends the history of its achievements. When the abortionists began to swarm into Rome, they also beckoned on the barbarians who made the imperial city a contemptible object of commiseration. Perhaps our late census may reveal truths equally unpleasant, and the American, whose parents have so ingeniously conspired to keep out of the world, may even cease to be a factor in the raging battle of races. There is much need of fellowship between the moralist and the physician. The Sybarite who drifts into all kinds of perversions, being an enemy of society, deserves at the very least, exile if not execution. Let us anyhow face the truth that there are many other sinners besides the French.—*Journal of American Association.*

The following lines were doubtless written by a poet who had wrestled with the *Gonococcus Neisseri* and had come out second best:

"Let strictures on my conduct pass,  
Unnoticed let them be;  
'Tis the stricture somewhere else, alas!  
That is deplored by me."

[Unidentified Exchange.]

### CYSTITIS IN WOMEN.

The *Journal de Médecine de Paris* gives the following prescription for cystitis in women:

℞ Citrate of potassium            ʒ ss.  
Fl. ext of triticum repens.  
Tr. of Belladonna, of each ʒ j.  
Fl. ext. of buchu                    ʒ ss.

Water enough to make four ounces.

M. Sig.: Teaspoonful in a wineglassful of water three times a day.—*Columbus Med. Journal*.

### NOVEL TREATMENT OF INGROWN TOE NAIL.

Dr. Puerckhauer recommends a novel, and simple and at the same time competent, treatment for ingrown toe nail: A 40 per cent. solution of potassa is applied warm to the portion of the nail to be removed. After a few seconds the uppermost layer of the nail will be so soft that it can be scraped off with a piece of sharp-edged glass; the next layer is then moistened with the same solution and scraped off; this must be repeated until the remaining portion is as a thin piece of paper, when it is seized with a pincette and lifted from the underlying soft parts and severed from the other half. The operation does not require more than half an hour's time, is painless and bloodless, while the patient is delivered from his suffering without being disabled even for an hour.—*Pittsburg Med. Review*.

### RESUME OF MEDICAL PRACTICE ACTS IN THE DIFFERENT STATES.

ALABAMA.—Examination and endorsement of diploma by a County Medical Society. Violation of law, \$100 fine.

ARIZONA.—Register diploma with county recorder. No examination.

ARKANSAS.—Five years' practice in State. Registration of diploma, or examination by State Board of Examiners.

CALIFORNIA.—Registration of diploma after endorsement by the State Board of either of the schools. After 1890-91, three sessions of six months each in separate years.

COLORADO.—Endorsement of diploma or examination by State Board of Examiners. After July 1, 1893, three years' study, including three sessions of at least twenty weeks each in different college years.

CONNECTICUT.—No law, except against advertising itinerant physicians.

DAKOTA.—Endorsement of diploma or examination by board. After 1891, three sessions required.

DELAWARE.—Eight years' practice in State. Registration and license by county clerk.

DISTRICT OF COLUMBIA.—Endorsement of diploma or examination by State Medical Board.

FLORIDA.—Endorsement of diploma or examination by either State Board of Examiners. The Homeopathic Board, which meets semi-annually, will endorse eclectic diplomas.

GEORGIA.—Register diploma before Clerk of Superior Court.

IDAHO.—Record diploma at county seat.

ILLINOIS.—Endorsement of diploma for registration or examination by State Board. Preliminary entrance examination required, or equivalent. After 1890-91, four years' study, and three sessions of at least twenty weeks each.

INDIANA.—Registration of diploma before county clerk.

INDIAN TERRITORY.—Examination or registration before different boards in each Indian nation.

IOWA.—Endorsement of diploma or examination and registration by State Board of Medical Examiners. After 1890-91, four years' reading, and three sessions of six months each in different years.

KANSAS.—Certificates issued by either of the three State societies.

KENTUCKY.—Registration and endorsement of diploma by Secretary of State Board of Health, or ten years' practice,

LOUISIANA.—Recording diploma before county clerk or justice of the peace after endorsement of same by State Board, which is "required to certify to the diploma of any medical institution of credit and respectability, without regard to its system of therapeutics."



MAINE.—No law.

MARYLAND.—Certificates issued by State Board of Health and recorded.

MASSACHUSETTS.—No law.

MICHIGAN.—Record diploma with county clerk.

MINNESOTA.—Examination by State Board of Examiners without regard to diploma. Certificate of three sessions' college attendance required.

MISSISSIPPI.—Examination by a County Board of Medical Censors.

MISSOURI.—Registration after examination or endorsement of diploma of State Board of Medical Examiners.

MONTANA.—Ten years' practice or endorsement and registration of diploma, or examination by State Board. Three sessions of at least four months now required.

NEBRASKA.—Registration before county clerk.

NEVADA.—Registration of diploma before county recorder. Penalty, \$500 for violation.

NEW HAMPSHIRE.—Board of Censors of each medical society can issue licenses.

NEW JERSEY.—Record of a copy of diploma from "legally chartered medical college of any State" with county recorder.

NEW YORK.—Endorsement of diploma for registration by any college within the State. Students who began study of medicine after June, 1889, must have certificate of regular preliminary qualifications, and pass examination before either of the three State Boards in addition to attendance upon a college requiring at least three sessions.

NORTH CAROLINA.—Examination by State Board.

OHIO.—No law enforced, except the one prohibiting any physician from suing patients for service unless he holds a diploma.

OREGON.—Registration after endorsement or examination by State Board of Examiners.

PENNSYLVANIA.—Registration of diploma before county prothonotary after endorsement by some medical college within the State. College allowed to charge a fee of \$25 for examination.

RHODE ISLAND.—No law.

SOUTH CAROLINA.—Endorsement of diploma of examination by a college within the State, or State Board of Medical Examiners.

TENNESSEE.—Registration after endorsement of diploma, or examination by State Board.

TEXAS.—Registration after endorsement of diploma, or examination by a District Board of Examiners.

VERMONT.—Registration after endorsement of diploma, or examination by a Board of Medical Censors appointed by either State Medical Society.

VIRGINIA.—Examination only by State or District Examining Boards.

WASHINGTON.—Examination or endorsement of diploma by State Medical Board.

WEST VIRGINIA.—Registration after endorsement by the State Board of Health.

WISCONSIN.—Examination or endorsement of diploma by any State or County Society.—*Medical World*.—*Southern Practitioner*.

#### YELLOW FEVER IN FRANCE.

We translate the following from *A Medicina Contemporanea*, of Lisbon, Portugal, March 8, 1891:

In a village not far from Lyons, four persons in one family died in short space of time, and it was rumored that they had been poisoned. The authorities felt themselves called upon to investigate the matter, and medical men were called in to perform the autopsies.

It was ascertained that there had not been any poisoning; the medical experts testified that the death was caused by a disease unknown to them, but which presented symptoms resembling those of yellow fever.

In tracing up the disease, it was concluded that the four persons had died of yellow fever, which had been carried to them by a parrot (*papagaio*) 'bought a short time before from a sailor in Marseilles, who had a few hours previously landed from a vessel hailing from South America.

Energetic measures were taken to prevent the spread of the plague.

#### THE VALUE OF A TRADE MARK.

In the United States Circuit Court, Eastern District of Louisiana, Judge Don A. Pardee granted a writ of injunction to Messrs. Battle & Co., of St. Louis, Mo., restraining Messrs. Finlay & Brunswig, of New Orleans, La., from using the word "Bromidia" on a preparation put up by the latter

firm. The word, "Bromidia" has been used for many years by Battle & Co. to designate a preparation of theirs, and they, by their labors, have made the name valuable; hence the suit to restrain the parties from making use of a thing the benefits of which in all justice they are entitled to enjoy.—*National Druggist*.

#### SELECTED FORMULÆ.

We take the following from the *Medical and Surgical Reporter*:

LOCAL ANÆSTHESIA FOR SLIGHT OPERATIONS.—For operations upon small abscesses, opening fistulous tracts, or removing superficial growths, it is recommended that local anæsthesia be secured by a spray of the following solution:

R Chloroform ..... 10 parts  
Sulphuric ether..... 15 "  
Menthol..... 1 part. M.

The anæsthesia which is thus obtained lasts from two to ten minutes.—*Lon. Medical Record*.

#### INJECTION FOR TUBERCULAR DIARRHŒA.—

R Olive oil..... 6 drachms.  
Guaiaicol..... 10 drops.  
Water..... 8 ounces.  
One yelk of an egg.....

—*Journal de Médecine de Paris*.

ANTISEPTIC GAUZE.—For plugging the uterus, Bar (*La Pratique Médicale*, February 17, 1891) has employed with advantage a gauze medicated with retinol iodoform. It is used as follows: The gauze, after being boiled in strong carbolized water, and well dried, is dipped in a mixture, the formula of which is not yet very precise; but the one used in the service of Bar consists of—

R Retinol..... 15 drachms.  
Wax ..... 1½ drachm.  
Iodoform ..... 8¾ drachms.

The employment of this mixture, as applied by means of the gauze, appears to present unusual advantages. Tampons made with gauze, prepared in this manner, are especially useful, inasmuch as they are apt to leave a good coating of iodoform upon the vaginal or cervical surface and thus assure complete asepsis of the mucous membrane.



POWDER FOR ACUTE ECZEMA.—*La Semaine Médicale* gives the following prescription of Alexinski for this condition:

R̄ Oxide of zinc ..... 15 grains.  
 Subnitrate of bismuth..... 30 “  
 Powdered starch ..... 1½ drachms.  
 Powdered lycopodium ..... 1½ “

This powder is to be dusted over the parts which are affected, night and morning.

GARGLE FOR ACUTE TONSILLITIS.—

R̄ Ammoniated tincture of guaiac, } of each 6 drachms.  
 Compound tincture cinchona, }  
 Chlorate of potassium ..... 2 “  
 Honey ..... 6 “  
 Powdered gum arabic, a sufficient quantity.  
 Distilled water enough to make 4 ounces.

From one-half to one teaspoonful of this should be used as a gargle in a little water every two or three hours.—*Journal de Médecine*.

PRESCRIPTION FOR TETANUS.—*Le Semaine Médicale* states that Mayer employs the following prescription in the treatment of tetanus:

R̄ Hydrochlorate of morphine..... ⅙ grain.  
 Chloral ..... 15 grains.  
 Bromide of sodium..... 20 “

Make into one powder, which should be wrapped in wax paper; give from three to six of these powders each day.—*Nevs*.

A GARGLE FOR THE RELIEF OF FETID BREATH.—The *Revue Générale de Clinique et de Thérapeutique* gives the following prescription for the relief of this condition:

R̄ Saccharine ..... }  
 Salicylic acid ..... } of each, 15 grains.  
 Bicarbonate of sodium.... }  
 Alcohol..... 1 ounce.  
 Essence of peppermint..... 10 drops.

A teaspoonful of this is to be placed in a wineglassful of hot water, and used as a gargle, once or twice daily.—*Nevs*.

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Dr. Chas. W. Dulles has retired from the editorial management of the *Medical and Surgical Reporter*. He is succeeded by Dr. Edward T. Reichert, Professor of Physiology in the University of Pennsylvania.

## MORTUARY REPORT OF NEW ORLEANS.

FOR APRIL, 1891.

| CAUSE.                           | White..... | Colored.. | Male..... | Female... | Adults... | Children.. | Total..... |
|----------------------------------|------------|-----------|-----------|-----------|-----------|------------|------------|
| Fever, Yellow .....              |            |           |           |           |           |            |            |
| “ Malarial (unclassified)....    | 4          | 1         | 1         | 4         | 1         | 4          | 5          |
| “ Intermittent .....             |            |           |           |           |           |            |            |
| “ Remittent .....                |            | 1         |           | 1         |           | 1          | 1          |
| “ Congestive .....               | 3          | 2         | 3         | 2         | 3         | 2          | 5          |
| “ Typho-Malarial....             | 5          |           | 4         | 1         | 4         | 1          | 5          |
| “ Typhoid or Enteric.....        | 1          |           |           | 1         |           | 1          | 1          |
| “ Puerperal .....                |            |           |           |           |           |            |            |
| Scarlatina .....                 | 1          |           |           | 1         |           | 1          | 1          |
| Small-pox .....                  |            |           |           |           |           |            |            |
| Measles .....                    | 5          | 1         | 4         | 2         |           | 6          | 6          |
| Diphtheria .....                 | 8          | 2         | 7         | 3         |           | 10         | 10         |
| Whooping Cough .....             | 1          |           | 1         |           |           | 1          | 1          |
| Meningitis .....                 | 6          | 3         | 2         | 7         | 2         | 7          | 9          |
| Pneumonia.....                   | 25         | 16        | 19        | 22        | 18        | 23         | 41         |
| Bronchitis .....                 | 10         | 10        | 8         | 12        | 9         | 11         | 20         |
| Consumption.....                 | 45         | 35        | 47        | 33        | 76        | 4          | 80         |
| Cancer .....                     | 8          | 2         | 2         | 8         | 10        |            | 10         |
| Congestion of Brain.....         | 8          | 4         | 5         | 7         | 4         | 8          | 12         |
| Bright's Disease (Nephritis) ... | 18         | 9         | 19        | 8         | 25        | 2          | 27         |
| Diarrhœa (Enteritis) .....       | 8          | 8         | 9         | 7         | 11        | 5          | 16         |
| Cholera Infantum .....           | 12         | 1         | 5         | 8         |           | 13         | 13         |
| Dysentery.....                   | 2          | 1         | 2         | 1         | 2         | 1          | 3          |
| Debility, General .....          | 1          | 4         | 3         | 2         | 5         |            | 5          |
| “ Senile .....                   | 15         | 9         | 9         | 16        | 25        |            | 25         |
| “ Infantile .....                | 2          | 3         | 3         | 2         |           | 5          | 5          |
| All other causes .....           | 149        | 92        | 129       | 112       | 155       | 86         | 241        |
| TOTAL .....                      | 338        | 204       | 282       | 260       | 350       | 192        | 542        |

Still-born Children—White, 14; colored, 17; total, 31.

Population of City—White, 184,500; colored, 60,500; total, 254,000.

Death Rate per 1000 per annum for City—White, 21.98; colored, 35.22.  
total, 25.61.

## DIPHTHERIA RECORD FOR APRIL, 1891.

| District. | CASES. |          |        | District. | DEATHS. |          |        |
|-----------|--------|----------|--------|-----------|---------|----------|--------|
|           | White. | Colored. | Total. |           | White.  | Colored. | Total. |
| 1         |        |          |        | 1         |         |          |        |
| 2         | 4      | 4        | 8      | 2         | 3       | 2        | 5      |
| 3         | 1      |          | 1      | 3         | 1       |          | 1      |
| 4         | 3      |          | 3      | 4         | 1       |          | 2      |
| 5         | 1      |          | 1      | 5         | 2       |          | 1      |
| 6         | 1      |          | 1      | 6         | 1       |          | 1      |
| 7         |        |          |        | 7         |         |          |        |
|           | 10     | 4        | 14     |           | 8       | 2        | 10     |

HENRY WILLIAM BLANC, M. D.,

Chief Sanitary Inspector.

## METEOROLOGICAL SUMMARY—APRIL.

STATION—NEW ORLEANS.

| Date..... | TEMPERATURE. |      |      | Precipn. in<br>inches and<br>hundredths.. | SUMMARY.                                                              |
|-----------|--------------|------|------|-------------------------------------------|-----------------------------------------------------------------------|
|           | Mean         | Max. | Min. |                                           |                                                                       |
| 1         | 68           | 73   | 62   | T                                         | Mean barometer, 30.066.                                               |
| 2         | 59           | 62   | 56   | T                                         | Highest barometer, 30.407, 6th.                                       |
| 3         | 58           | 63   | 54   | o                                         | Lowest barometer, 29.747, 23d.                                        |
| 4         | 50           | 56   | 44   | o                                         | Mean temperature, 68.0.                                               |
| 5         | 50           | 59   | 41   | o                                         | Highest temperature, 84, 27th; lowest, 41, 5th.                       |
| 6         | 54           | 63   | 44   | o                                         | Greatest daily range of temperature, 20, 27th.                        |
| 7         | 60           | 69   | 52   | T                                         | Least daily range of temperature, 6, 2d.                              |
| 8         | 66           | 74   | 58   | o                                         | MEAN TEMPERATURE FOR THIS MONTH IN—                                   |
| 9         | 68           | 76   | 60   | o                                         | 1871.....68.2    1876.....68.9    1881.....66.8    1886.....65.6      |
| 10        | 69           | 75   | 63   | o                                         | 1872.....70.4    1877.....67.9    1882.....72.5    1887.....67.9      |
| 11        | 70           | 78   | 61   | o                                         | 1873.....66.1    1878.....71.7    1883.....71.4    1888.....69.9      |
| 12        | 69           | 78   | 60   | o                                         | 1874.....65.5    1879.....68.0    1884.....68.2    1889.....70.2      |
| 13        | 70           | 77   | 64   | o                                         | 1875.....65.5    1880.....71.2    1885.....70.5    1890.....70.3      |
| 14        | 72           | 80   | 65   | o                                         | 1891.....68.0                                                         |
| 15        | 72           | 79   | 65   | o                                         | Total deficiency in temp'ture during month, 48.                       |
| 16        | 73           | 80   | 66   | o                                         | Total excess in temp'ture since Jan. 1, 11.                           |
| 17        | 73           | 81   | 65   | T                                         | Prevailing direction of wind, S. E.                                   |
| 18        | 72           | 77   | 68   | T                                         | Total movement of wind, 6650 miles.                                   |
| 19        | 72           | 79   | 66   | T                                         | Extreme velocity of wind, direction, and date,                        |
| 20        | 72           | 78   | 67   | o                                         | 27 miles, N. W., 2d.                                                  |
| 21        | 72           | 79   | 65   | T                                         | Total precipitation, 0.26 inches.                                     |
| 22        | 72           | 78   | 66   | .18                                       | Number of days on which .01 inch or more of                           |
| 23        | 72           | 78   | 67   | o                                         | precipitation fell, 2.                                                |
| 24        | 70           | 76   | 63   | o                                         | TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)                        |
| 25        | 73           | 80   | 66   | o                                         | FOR THIS MONTH IN—                                                    |
| 26        | 72           | 81   | 62   | o                                         | 1871..... 2.29    1876..... 6.41    1881..... 3.92    1886..... 5.60. |
| 27        | 74           | 84   | 64   | o                                         | 1872..... 5.01    1877..... 4.79    1882..... 4.83    1887..... 1.87  |
| 28        | 72           | 81   | 63   | o                                         | 1873..... 1.74    1878..... 1.51    1883..... 1.42    1888..... 1.89. |
| 29        | 72           | 80   | 65   | o                                         | 1874..... 13.62    1879..... 9.17    1884..... 6.48    1889..... 2.26 |
| 30        | 72           | 80   | 65   | o                                         | 1875..... 8.05    1880..... 6.88    1885..... 3.67    1890..... 3.46  |
|           |              |      |      |                                           | 1891..... 0.26                                                        |
|           |              |      |      |                                           | Total deficiency in precip'n during month, 5.12.                      |
|           |              |      |      |                                           | Total deficiency in precip'n since Jan. 1, 6.66.                      |
|           |              |      |      |                                           | Number of clear days, 11; partly cloudy days,                         |
|           |              |      |      |                                           | 13; cloudy days, 6.                                                   |
|           |              |      |      |                                           | Dates of Frost, .....                                                 |
|           |              |      |      |                                           | Mean maximum temperature, 75.1.                                       |
|           |              |      |      |                                           | Mean minimum temperature, 60.9.                                       |

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

G. E. HUNT, *Sergeant, Signal Corps Observer.*



PUBLISHERS'



DEPARTMENT.

# The New Orleans Medical and Surgical Journal.

Subscription, Three Dollars per annum, in advance.

Advertisements, as per Printed Schedule mailed to applicants.

NEW SERIES:  
Whole No. 318.

**JUNE, 1891.**

VOL. XVIII.  
No. 12.

## NEW ADVERTISEMENTS IN THIS ISSUE.

|                                   | PAGE. |                                            | PAGE.   |
|-----------------------------------|-------|--------------------------------------------|---------|
| Battle & Co .....                 | 13    | Schieffelin & Co., W. H. ....              | 3       |
| Caswell, Massey & Co .....        | 15    | Sharp & Dohme—Chemists .....               | Cover 2 |
| Chattanooga Medical College ..... | 15    | The Journal of Gynecology .....            | 31      |
| Dioviburnia .....                 | 26    | Tulane University of Louisiana .....       | 30      |
| Mariani & Co .....                | 5     | Woman's Medical College of Baltimore ..... | 15      |

## INDEX TO ADVERTISEMENTS.

|                                                    | PAGE. |                                           | PAGE. |
|----------------------------------------------------|-------|-------------------------------------------|-------|
| Antikamnia .....                                   | 20    | Mellins Infants Food .....                | 1     |
| Arlington Chemical Co .....                        | 14    | Moore McGregor Medication .....           | 18    |
| Baker's Breakfast Cocoa .....                      | 27    | N. Y. Pharmaceutical Co .....             | 6     |
| Baker & Co., Jno. C .....                          | 20    | N. Y. Post-Graduate Medical College ..... | 22    |
| Baltimore Medical College .....                    | 18    | Peacock's Bromides .....                  | 24    |
| Bellevue Hospital Medical College .....            | 27    | Pomeroy Truss Co .....                    | 27    |
| Boehringer & Soehne .....                          | 10    | Planten's Capsules .....                  | 24    |
| Bowden Lithia Springs Co .....                     | 25    | Robinson-Pettet Co .....                  | 2     |
| California Fig Syrup .....                         | 11    | "Sanitas" Antiseptics, etc. ....          | 1     |
| Celerina .....                                     | 21    | Tarrant & Co .....                        | 17    |
| Cerebro-Spinant— I. O. Woodruff & Co .....         | 23    | Tasteless Quinine .....                   | 15    |
| Claudel, Optician .....                            | 18    | The Wm. S. Merrell Chemical Co .....      | 9     |
| Cook, Gus .....                                    | 18    | The R. Hyde Co .....                      | 24    |
| Ford's Digestive Tablets .....                     | 19    | Wagner Medical Manufacturing Co .....     | 7     |
| Health Restorative Co .....                        | 4     | Wayne's Diuretic Elixir .....             | 12    |
| Herrick Uterine Supporter .....                    | 18    | Wheeler's Tissue Phosphates .....         | 29    |
| Hospital for Women and Children, New Orleans ..... | 28    |                                           |       |
| Kentucky School of Medicine .....                  | 18    |                                           |       |
| Maltine .....                                      | 8     |                                           |       |
| Marchand's Peroxide of Hydrogen .....              | 32    |                                           |       |
| Martin's Vaccine Virus .....                       | 18    |                                           |       |
| McDermott, A .....                                 | 15    |                                           |       |
| Medical Dep't of the Tulane University .....       | 24    |                                           |       |

### COVER.

|                                |   |
|--------------------------------|---|
| Fairchild Bros. & Foster ..... | 2 |
| Fellows, James I .....         | 4 |
| Reed & Carnrick .....          | 3 |

**N. B.** Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

## PUBLISHERS' NOTES.

NEW ORLEANS.

I AM happy to testify having frequently prescribed the "VIN MARIANI," and have obtained most satisfactory results in stomachelical derangements and cases of anæmia.

J. TOUATRE, M. D.

ORLANDO, FLA., January 5, 1891.

*Antikamnia Chemical Co., St. Louis, Mo.*

GENTLEMEN:—I have used Antikamnia, and I am perfectly delighted with the results. I have given it in "La Grippe," Intermittent Neuralgia, and other Neuralgic affections, with the happiest results. I have requested my druggist to order a supply.

Yours truly,

J. W. HICKS, M. D.

HE WHO assists the physician benefits the race. Use Georgia Bromine Lithia Water, Doctor.

ST. LOUIS, June 21, 1888

FOR a long while I have been in the habit of prescribing fluid extract of viburnum prunifolium, in those painful, functional disorders of the uterus and appendages occurring in cases that come under my care for renal and vesical diseases. My results have been satisfactory. Of late, I have given the remedy in the form of DIOVIBURNIA, as prepared by a well-known St. Louis Pharmacist, and the results are equally good, perhaps better; and the method of administration vastly superior.

JOHN P. BRYSON, Professor of Genito-Urinary Organs, St. Louis Medical College.

FOR the past three years I have prescribed BROMIDIA very frequently, and have never yet been disappointed in securing the results required. In cases when there is Insomnia without pain in the delirious stages of acute fevers, in delirium tremens, puerperal mania, in short, in all those cases requiring soporifics, I find BROMIDIA invaluable. I consider BROMIDIA an excellent combination

JOSEPH P. ROSS, Professor Clinical Medicine and Diseases of the Chest, Rush Medical College, Chicago, Ill.

BOWDEN LITHIA WATER—under seal—by the gallon. Doctor, try it.

I had a confirmed case of epilepsy on hand having from five to twenty fits a day. I tried Bromide Pot. and Chloral, and while this treatment reduced the attacks considerably, it did not compare with the effects of Peacock's Bromides. I am just in receipt of a letter from the patient's father asking me to send him some more of that medicine for his child, saying that he has not had a fit in three weeks.

BLACK MINGO, S. C.

T. P. STEELE, M. D.

ANDREW BOYD, M. D., Vice-President of the Tri-State Medical Association, Scottsboro, Ala., says: "It gives me pleasure to say that for two years I have prescribed S. H. KENNEDY'S EXTRACT OF PINUS CANADENSIS, both alone and in combination, in many acute and subacute inflammations of the mucous membrane. As a disinfectant and astringent I do not know its superior. It forms the base of my prescriptions for pharyngeal pharyngitis used as a spray. Have used it undiluted in ulcerated sore throat and ulcers of rectum. I use it daily almost in common sore throat, diluted with aqua carbolic. It has given me good results, and I am very glad you have given us a preparation we can rely upon.

## INSOMNIA OF DRUNKARDS.

R. Bromidia [Battle].....2 OZ.  
 Celerina [Rio].....2 OZ.  
 M. Sig. Teaspoonful, repeated as necessary.

THE attention of our readers is called to the advertisement of MESSRS. A. ROBINSON & CO., which appears on page 2 of this issue. This house is one of long standing, and enjoys a reputation of the highest character. The preparations referred to, we commend specially to the notice of practitioners.

## EXTRACT FROM AN ARTICLE ON "THE USE OF ANTIKAMNIA, ETC., ETC."

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ECLECTICAL MEDICAL JOURNAL, January, 1891.

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*Dose.*—*Internally*: One teaspoonful three or more times a day (as indicated), either full strength, or diluted, as necessary for varied conditions.

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*Allowed.*—Cooked fruits without much sugar, tea and coffee in moderation. Alcoholic stimulants, if used at all, should be in the form of light wines, or spirits well diluted. The free ingestion of pure water is important.

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The next annual session of this Department, now in the fifty-seventh year of its existence, will begin on Monday, October 20th 1890, and end on Wednesday, April 1st, 1891. The first two weeks of the term will be devoted to Clinical Medicine, Surgery, Obstetrics, and Gynecology in the wards and amphitheatre of the Charity Hospital; to practical Chemistry in the Chemical Laboratory; and practical Anatomy in the spacious and well ventilated anatomical rooms of the University.

The means for practical instruction are unsurpassed in the United States, and special attention is called to the superior opportunities presented for

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| Matriculation Ticket (once only, on admission) .....    | \$ 5 00      | \$          |
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
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NEW YORK, May 1, 1890.

The Annual of the Universal Medical Sciences for 1889, says: "A perfect Infant Food is still a desideratum: such a food will probably be evolved in the mind of some manufacturer who understands the physiology of infantile digestion and the chemistry of milk. A substitute for human milk to approximate the latter closely should be made entirely from cow's milk, without the addition of any ingredient not derived from milk."

"But not alone do we demand that these Milk Foods contain the equivalent of the solids in human milk, and especially of the albuminoids derived from milk, but that the latter be gathered with the utmost care from properly fed animals, transported with the least possible jolting to the factory, maintained during its transit at a low temperature, then transferred to an apparatus for sterilization, and immediately after the latter has been accomplished reduced to the dry state, in order to prevent the formation of those organisms which Loeffler, Pasteur and Lester have found to develop in fluid milk after boiling under an alkaline reaction. If such a preparation be put into air-tight and sterilized jars, all will have been accomplished that can be done to render the food sterile, and thus fulfil the chief indications in the prevention of the most serious gastro-intestinal derangements."

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SESSION OF 1890-91.

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THE SPRING SESSION consists of recitations, clinical lectures and exercises, and didactic lectures on special subjects. This session begins about the middle of March and continues until the middle of June. During this session, daily recitations in all the departments are held by a corps of Examiners appointed by the Faculty.

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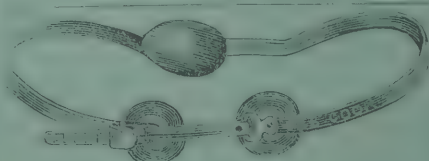


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THE PRELIMINARY SESSION will begin on Wednesday, September 24, 1890, and end September 30, 1890, it will be conducted on the same plan as the Regular Winter Session.

THE REGULAR WINTER SESSION, will begin October 1, 1890, and end about March 1, 1891. The plan of instruction consists of Didactic and Clinical Lectures, recitations and laboratory work in all subjects in which it is practicable.

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Each of the seven Professors of the Regular Faculty, or his assistant, will conduct a recitation on his subject one evening each week.

THE SPRING SESSION will begin March 25th, and end the last week in May. The daily Clinics and Special Practical Courses will be the same as in the Winter Session, and there will be Lectures on Special Subjects by Members of the Faculty.

It is supplementary to the Regular Winter Session. Nine months of instruction are thus secured to all students of the University who desire a thorough course.

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## PHENACETINE - BAYER

In therapeutic action it is like all the analgesic antitermics, it has a double action—it lowers temperature and soothes pain. The lowering of the temperature is noticeable in cases of pyrexia. In fevers,  $7\frac{1}{2}$  grains of Phenacetine lowers the temperature by  $1.8^{\circ}$  to  $3.4^{\circ}$  F., and the antithermic action following such a dose lasts four hours. In certain cases the apyrexial period is more prolonged even from the same dose. Phenacetine is thought by some to be superior to antipyrin and acetanilid in producing marked antithermic effects without toxic phenomena. But it is above all as an analgesic that phenacetine outrivals its predecessors. While it is as powerful, it does not produce pain in the stomach or the scarlatina-form rash of the antipyrin, nor does it give rise to the cyanosis of the acetanilid. However prolonged may be its administration, no bad effect has ever been seen from its use. It has been used for the relief of every form of pain, even for the lightning pain of tabes, with the best results. This double action as an antithermic and as an analgesic, results from an effect produced upon the spinal chord; and phenacetine may be considered a depressor of the excitability of the medulla. The digestive, respiratory, and circulatory systems are not at all affected by phenacetine. It is inodorous, it is tasteless, and it is innocuous. [From a paper presented to the Central Kentucky Medical Association, by Steele Bailey, M. D., New England Medical Monthly, March, 1890].

*Phenacetine-Bayer, prepared by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, is supplied by us in ounces and also in the form of our soluble pills and compressed tablets, containing two, four, and five grains each. Either form may be obtained of any reputable apothecary.*

## A-R-I-S-T-O-L

Aristol, a combination of iodine and thymol, manufactured by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, Germany, is a valuable, inodorous, and non-toxic antiseptic remedy said to be superior to Iodoform, Iodole and Sozo-Iodole.

For further information regarding this new remedy we would refer to the notes we have published, which we will be pleased to mail to applicants.

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Sulfonal is of great value in the insomnia of the insane, and the dose should be repeated once during the night if the sleep is to short. It is specially recommended in cases of nervous insomnia, also in the sleeplessness of delirium tremens. In the latter case, gr. xx. should be administered every two hours until lx. or lxxx. grs. have been taken, but it should be remembered that every case of delirium tremens is also a case of starvation, and to produce sleep the patient must be fed. Dose as a hypnotic, gr. xv-xx." [From Notes, Materia Medica and Therapeutics. Lectures delivered by Prof. Wm. H. Thomson, M. D., LL.D. Edited by Wm. H. McEnroe, M. D.].

*Sulfonal-Bayer, prepared by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, is supplied by us in ounces and in form of Tablets of five, ten, and fifteen grains, put up in bottles of 10 and 100 tablets each.*

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Prof. WM. A. HAMMOND, M. D., says: A wineglassful of this tonic, taken when one is exhausted and worn out, acts as a most excellent restorative; it gives a feeling of rest and relief, and there is no reaction and no subsequent depression. A general feeling of pleasantness is the result. **I have discarded other wines of coca and use this alone.** It produces also excellent results in cases of depression of spirits; in hysteria, headache, and in nervous troubles generally it works admirably. It is a simple remedy, yet efficacious and remarkable in its results.

# FEBRICIDE

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On November 6th I was called in consultation to see Mr. W., who was suffering from the most violent attack of ASTHMA, the paroxysm so frequent that suffocation seemed only a matter of a little time. We gave him one "FEBRICIDE PILL" and ordered one every two hours; ordered hot mustard foot-bath; his doctor remained with him. I returned per request in seven hours; to my surprise, he was breathing, talking, and, as he informed me, felt first-rate.

DR. D. W. MCCARTHY.

I have used your FEBRICIDE with excellent results in our Mountain Fevers (typhoid), reducing, in one case, the temperature from  $104\frac{1}{2}$  with dry, brown furried tongue in ten hours, to  $99\frac{1}{2}$  with tongue cleaning promptly and moist, and rapid improvement dating therefrom. Have used Antipyrin in similar cases with no good results.

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Containing Sulphate of Soda, Carbonate of Soda, Phosphate of Soda, Chloride of Sodium, Sulphate of Lime, Sulphate of Magnesia, and Carbonate of Lithia. For Habitual Constipation, Rheumatic and Gouty Affections, Biliousness, Corpulence, Dyspepsia, and all Derangements of the Digestive Tract, it is a wonderful remedy. *Does not gripe after administration.*

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Sufficient acid only is added to this preparation to properly preserve the pepsin, and if an acid dose is desired in connection with the pepsin, we recommend our Ess. Pepsin Lactated, or the following:

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Ess. Pepsin, - - - - - q. s. ad f 3 iv.  
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The Pepsin and Pancreatin used in these tablets possess highest digestive power and cannot fail to promptly start and accomplish the digestion of food, whilst the Caffeine by its stimulant tonic action on stomach and bowels, assists and quickens the normal digestion and assimilation of food. The Acid Lacto-Phosphate of Calcium also contributes to the tonic action of the tablets, and aids to build up the general system, and a small quantity of that refreshing aromatic nerve stimulant, Celery, imparts a pleasant flavor, and acts as an appetizer.

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# AN OPEN LETTER TO THE MEDICAL PROFESSION.

## The Infant Food Problem Solved.

NEW YORK, May 1, 1890.

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"But not alone do we demand that these Milk Foods contain the equivalent of the solids in human milk, and especially of the albuminoids derived from milk, but that the latter be gathered with the utmost care from properly fed animals, transported with the least possible jolting to the factory, maintained during its transit at a low temperature, then transferred to an apparatus for sterilization, and immediately after the latter has been accomplished reduced to the dry state, in order to prevent the formation of those organisms which Loeffler, Pasteur and Lester have found to develop in fluid milk after boiling under an alkaline reaction. If such a preparation be put into air-tight and sterilized jars, all will have been accomplished that can be done to render the food sterile, and thus fulfil the chief indications in the prevention of the most serious gastro-intestinal derangements."

"Such a food, too, would have the advantage of being easily and rapidly prepared by addition of sterilized water, affording an altogether sterilized food."

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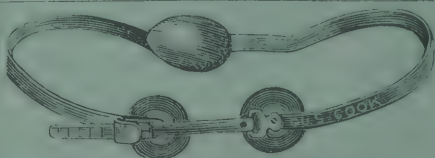


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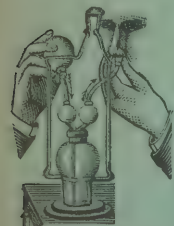
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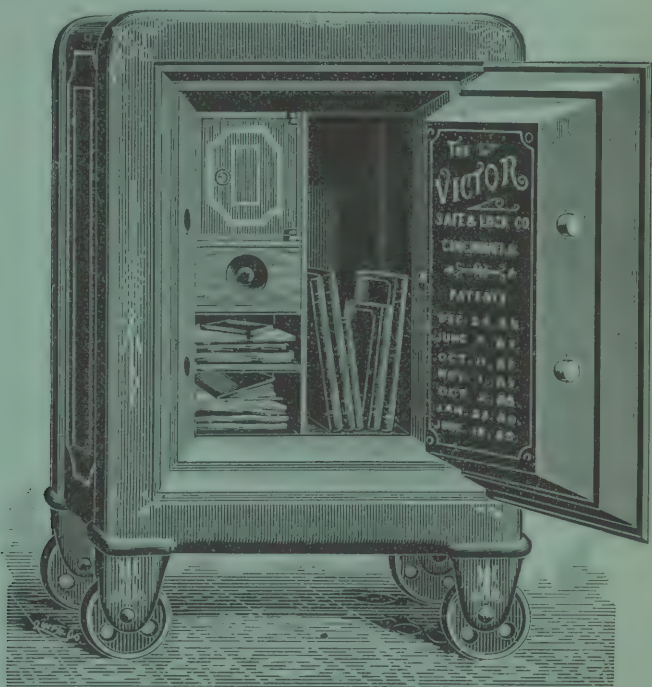
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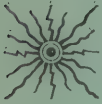
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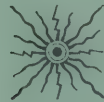
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Respectfully,

JNO. B. JOHNSON.

L. Ch. Boisliniere, Professor Obstetrics, St. Louis Medical College.

ST. LOUIS, June 18, 1888.

I have given DIOVIBURNIA a fair trial and found it useful as an uterine tonic and antispasmodic, relieving the pains of dysmenorrhœa, and regulator of the uterine functions. I feel authorized to give this recommendation of DIOVIBURNIA, as it is neither a patented nor a secret medicine, the formula of which having been communicated freely to the medical profession.

L. CH. BOISLINIERE, M. D.

H. Tuholski, M. D., Professor Clinical Surgery and surgical Pathology, Missouri Medical College, also Post-Graduate School of St. Louis

ST. LOUIS, June 23, 1888.

I have used DIOVIBURNIA quite a number of times—sufficiently frequently to satisfy myself of its merits. It is of unquestionable benefit in painful dysmenorrhœa; it possesses antispasmodic properties which seem especially to be exerted on the uterus.

DR. H. TUHOLSKE.

FOR FURTHER INFORMATION AND SAMPLE BOTTLES SEE BELOW.

# PALPEBRINE

A TRUSTWORTHY REMEDY IN EXTERNAL EYE DISEASES.

THE forms of the disease for which this compound is highly recommended are the following: Simple Conjunctivitis, Acute and Chronic Catarrhal Conjunctivitis, Venereal Conjunctivitis, Acute and Chronic Blepharoid Conjunctivitis, Strumous or Scrofulous Conjunctivitis, Marginal Blepharitis and inflammation of the Lachrymal Sac.

**PALPEBRINE** is not a SECRET remedy, we give the formula in full. It contains no unknown and untried agents, but is composed of the following well-known drugs which will commend it to the profession at once.

**FORMULA**.—Acidum Boracicum, one per cent.; Hydrargyrum Bichloridum, one part in 5,000; Tincture of Opium, a trace; Zincum Sulphuricum, one part in 1,000 Glycerinum Purum, one part in 10.

EYE diseases are the best and most fruitful field for quackery, and the amount of harm being done by quacks and patent medicines in eye diseases is fearful to behold. In offering PALPEBRINE to the profession we wish to give to the busy practitioner a reliable and safe remedy, easily prescribed, of known qualities and quantities. We are certain after a trial our efforts will be appreciated.

TO any physician, unacquainted with the medicinal effects of DIOVIBURNIA and PALPEBRINE, we will mail pamphlet containing full information, suggestions, commendations of some of the most prominent practitioners in the profession, and various methods of treatment; also a variety of valuable prescriptions that have been thoroughly tested in an active practice, or to physicians desiring to try our preparations, and who will pay express charges, we will send on application a full size bottle of each, free.

DIOS CHEMICAL CO., ST. LOUIS, MO., U. S. A.



# CH. MARCHAND'S PEROXIDE OF HYDROGEN,

(MEDICINAL)  
H<sub>2</sub> O<sub>2</sub>

(ABSOLUTELY HARMLESS)

Is rapidly growing in favor with the medical profession. It is the most powerful antiseptic known, almost tasteless and odorless. Can be taken internally or applied externally with perfect safety. Its curative properties are positive, and its strength and purity can always be relied upon. This remedy is not a Nostrum.

Experiments by Prof. Pasteur, Dr. Koch, and many other scientific authorities, prove beyond doubt that Germs, Bacteria or Microbes cause and develop **NOSE, THROAT AND LUNG DISEASES**—Diphtheria, Croup, Sore Throat, Catarrh of the Nose, Hay Fever, Bronchitis, Laryngitis, Pharyngitis, Whooping Cough, Consumption and other Chronic Affections, specific or not. **GERMS, BACTERIA or MICROBES** are instantaneously annihilated when brought into contact with Ch. Marchand's Peroxide of Hydrogen. This wonderful bactericide acts both chemically and mechanically upon all excretions and secretions, so as to thoroughly change their character and reactions instantly. By destroying the microbial element this remedy removes the cause of the disease.

**CAUTION.**—I would earnestly impress upon the profession the very great importance of prescribing only my Peroxide of Hydrogen (medicinal), from which all hurtful chemicals have been eliminated. By specifying in your prescriptions "Ch. Marchand's Peroxide of Hydrogen (Medicinal)," which is sold only in  $\frac{1}{4}$ -lb.,  $\frac{1}{2}$ -lb., and 1-lb. bottles, bearing my label and signature, you will never be imposed upon.

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is intended to be used as an internal remedy or for local dressings. It is absolutely harmless; and Ozone is its healing agent.

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Taken after food it will be found to aid digestion and assimilation.

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PRICE: 6-OZ. BOTTLES, 50C.; PINTS, \$1.00.

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**For Infants and Children**—A reliable substitute for mother's milk, and sure preventive against cholera infantum.

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**For Dyspeptics**—Palatable and digestible.

**For the Aged**—Strengthening and pleasing.

**For Nursing Mothers**—Nourishing and sustaining.

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For Infants, Children, Invalids, Dyspeptics, the Aged, and Nursing Mothers.—Dissolve one even tablespoonful in a half pint of cold water and boil for two minutes, *continually stirring to prevent burning*, and strain. Should be luke warm when taken. A reliable substitute for mother's milk. **Does not constipate.** To increase the already appetizing flavor, four tablespoonfuls of good milk could be added before boiling, but it is quite unnecessary. Small quantity of sugar can be added to suit taste, but this is not necessary.

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ELISHA HARRIS, M. D.,

Late Sanitary Superintendent of the Metropolitan District, New York, U. S. A.

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**SUCCUS ALTERANS** may be given for any length of time, without injury to the patient.

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**C**OCA LEAVES have been successfully used in the treatment of the Opium habit and as a remedy for the abuse of intoxicants. They are recommended in cases of mental depression, physical exhaustion, nervous headache and in the typhoid state of fevers, remarkable nerve stimulant and exhilarating effects being attributed to the drug by medical authorities. OUR WINE COCA presents this drug in a palatable form, the vehicle being Pure Sherry Wine. The best assayed Coca Leaves are used and we guarantee a high Cocaine percentage. Each fluidrachm equals  $7\frac{1}{2}$  grains Coca.

**Dose**—The dose of this wine is from a teaspoonful to two tablespoonsful (1 fldr. to 1 fld. oz.) to be taken two or three times daily or oftener.

**PINT BOTTLES, \$1.00.**

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*Dear Sirs:*—It gives me pleasure to state that I have used your preparations of Hypophosphites and Wine Coca, with most excellent results. The Wine Coca I used in a case of Exophthalmic Goitre. The patient has been bedridden for three years and it has given her more comfort than anything she has taken, and enables her to go about her room with comparative ease. The reputation of your house gives assurance that these reliable remedies are what they are represented to be, and I can recommend them both.

Yours truly,

(Signed)

T. P. SATTERWHITE.

OFFICE OF MONROE COUNTY BOARD OF HEALTH.

ANDREW J. AXTELL, M. D. Sect'y.

MESSRS. R. A. ROBINSON & Co.

BLOOMINGTON, IND.

*Sirs:*—I deem the following statements due you. Having been a sufferer from Nervous Headache for over forty years, I was induced to try your Wine Coca. Since that time I have been taking one tablespoonful each day, and have not since I commenced the use of it, been troubled with the Headache. I have not been free from it for that length of time in twenty years. I think it will effect a permanent cure. Having tried heretofore nearly every remedy I could hear of, this is the first one that has given me any relief.

Yours respectfully,

(Signed)

A. J. AXTELL, M. M.

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Paraldehyd ( $C_2H_2O_2$ ) is a therapeutical agent which has been in use for the past few years only. It is formed by the action of mineral acids upon Aldehyd, ( $C_2H_4O$ .)

"In doses of forty-five grains, it is said to calm restlessness and insomnia, and procure unbroken sleep of from four to seven hours duration, and to leave behind neither languor, nausea, nor digestive disorders. It also acts as a diuretic. It has been found efficient in the INSOMNIA of various acute diseases, and also in acute MANIA, and the excited paroxysms of chronic insanity and dementia. Paraldehyd appears closely to resemble chloral in its physiological and therapeutic action, but is not so depressing to the heart as is that agent.

It is also claimed to be a valuable ANTIDOTE to STRYCHNINE.

In delirium tremens and morphiomania it has been used with good results.

Our Elixir contains forty-five grains of the Paraldehyd in each fluidounce, dissolved in an aromatic menstruum, whereby the objectionable taste of the chemical is, to a great extent disguised and the preparation rendered palatable.

**Dose**—Two to eight fluidrachms.

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# "SANITAS,"

## Antiseptics, Disinfectants and Oxidants.

"Sanitas" is prepared by oxidizing Terpene in the presence of water with atmospheric air.

### "SANITAS" DISINFECTING FLUID:

An aqueous extract of Air Oxidized Terpene. Its active principles include Soluble Camphor ( $C_{10}H_{16}O_2$ ) Peroxide of Hydrogen and Thymol.

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"Sanitas" is fragrant, non-poisonous, and does not stain or corrode. It is put up in the form of

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Fig. 1.—The Old Style discarded on account of pulling apart, while the elastic is still in good condition.

Fig. 2.—The New Style cannot pull apart and consequently lasts until worn out.

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Fig. 1.

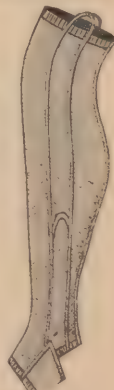


Fig. 2.

# ARISTOL.

ARISTOL, a combination of Iodine and Thymol, manufactured by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, Germany, is a valuable, odorless and non-toxic antiseptic remedy said to be superior to Iodoform, Iodole and Sozo-Iodole.

ARISTOL is insoluble in water and glycerine, and very sparingly in alcohol, but is very easily soluble in ether and chloroform. The ether solution is precipitated by the addition of alcohol. ARISTOL is very freely soluble in fatty oils. The solution must be made in the cold, by stirring, as the use of heat causes a decomposition. For the same reason it is necessary to protect the bottle from light and keep it in opaque bottles. It very readily adheres to the skin, and can thus be used as a powder strewn over wounds and burns.

In cases of mycosis it also acts well, and more quickly than any other known remedy, and does not cause irritation, like so many drugs.

The effective use of ARISTOL in psoriasis is of great interest, as our *Materia Medica* has hitherto supplied us with no non-poisonous drug, save only chrysarobin, the use of which is associated with a deep skin coloration and conjunctivitis—drawbacks from which Aristol is absolutely free.

In cases of lupus it is said to surpass even the best known remedies.

The value of ARISTOL can scarcely be over-estimated, as we have in it a drug possessing the good properties of Iodoform, but free from its toxic qualities. Its freedom, too, from any suspicious odor will be at once appreciated, both by the physician and his patient.

*Aristol, prepared by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, is supplied by us in ounces.*

# SULFONAL-BAYER.

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*Sulfonal-Bayer, prepared by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, is supplied by us in ounces and in the form of Tablets of five, ten, and fifteen grains, put up in bottles of 10 and 100 tablets each.*

*We also offer Sulfonal-Bayer in the form of our soluble pills containing five grains each.*

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Suffering from chronic rheumatism of the forearm, I have tested it repeatedly in my own person, and have given it to many who have suffered from insomnia, or inability to sleep from any transient cause, fatigue, nervousness, excitement, etc., in either sex."—*Medical Record, New York.*

*Phenacetine-Bayer, prepared by the Farbenfabriken, formerly Friedr. Bayer & Co., Elberfeld, is supplied by us in ounces and also in the form of our soluble pills and compressed tablets, containing two, four, and five grains each. Either form may be obtained of any reputable apothecary.*

It gratifies us to be able to announce that PHENACETINE, SULFONAL and SALOL have been incorporated into the new German Pharmacopœia just issued, and have been proposed by the General Medical Council of Great Britain for introduction into the forthcoming Addendum to the British Pharmacopœia. This action confirms and endorses our judgment in introducing these valuable remedies to the medical profession of the United States and is a natural sequence of the favorable results experienced in their employment, and of the brilliant and conclusive testimony thereof, which had been so freely furnished by the most talented of the profession both in Europe and in the United States.]

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# RESTORATIVE WINE OF COCA

*For Nervous Prostration, Brain Exhaustion, Neurasthenia, and all forms of Mental and Physical Debility.*

This WINE OF COCA is so prepared that it contains the active principle of the leaves in a perfectly pure form. Moreover, it is absolutely free from all those foreign substances which all other wines of coca contain, and which interfere, to a great extent, with its curative influence. It is well known that the cocaine contained in the coca-leaves varies considerably in its proportion; hence, giving to the wines as ordinarily made, uncertain strength, and causing them to be unreliable in their action on the system. In the RESTORATIVE WINE OF COCA the proportion of alkaloid is invariable, and the physician can, therefore, prescribe it with the certainty of obtaining uniform results.

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# FEBRICIDE

*A Complete Antipyretic, a Restorative of the Highest Order, and an Anodyne of Great Curative Power.*

✕ Each pill contains the one-sixth of a grain of the Hydrochlorate of Cocaine, two grains of the Sulphate of Quinine, and two grains of Acetanilide.

"Febricide" will be found to be possessed of great curative power in Malarial Affections of any kind, and in all inflammatory diseases of which Fever is an accompaniment. **For Neuralgia, Muscular Pains, and Sick Headache, it is a Specific.**

Prof. WM. F. WAUGH, M. D., of Philadelphia, writes: In a case of persistent neuralgic headache, worse on awakening, with a possibility of malaria, "Febricide" gave instant relief.

No. 100 W. 7th Street, Cincinnati, O., Nov. 9, 1889.

On November 6th I was called in consultation to see Mr. W., who was suffering from the most violent attack of ASTHMA, the paroxysm so frequent that suffocation seemed only a matter of a little time. We gave him one "FEBRICIDE PILL" and ordered one every two hours; ordered hot mustard foot-bath; his doctor remained with him. I returned per request in seven hours; to my surprise, he was breathing, talking, and, as he informed me, felt first-rate.

DR. D. W. McCARTHY.

SPRINGVIEW, NEB., Nov. 25, 1889.

I have used your FEBRICIDE with excellent results in our Mountain Fevers (typhoid), reducing, in one case, the temperature from 104½ with dry, brown furried tongue in ten hours, to 99½ with tongue cleaning promptly and moist, and rapid improvement dating therefrom. Have used Antipyrin in similar cases with no good results.

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Samples will be sent free of charge to any Physician who may wish to examine the same.

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Continued use in Hospital, Clinic and Private practice during thirty years,  
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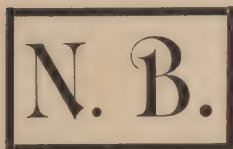
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"All cases where general toning or strengthening of the  
system is needed."

"The only tonic stimulant without any unpleasant re-  
action, and may be given indefinitely, never causing  
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This Wine has been found always uniform and reliable, owing  
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And will commend itself to every intelligent physician by its perfect safety, promptness of action, and the results obtained by its employment, without sequalæ.

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The SUGAR in MELLIN'S FOOD is MALTOSE. MALTOSE is the PROPER SUGAR for use in connection with cow's milk.

The sugar formed by the action of the Ptyalin of the Saliva and the Amylopsin of the Pancreas upon starch is MALTOSE. In the digestive tract MALTOSE is absorbed UNCHANGED.

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Manufacturing ✦ Pharmacists,

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NUTRITIVE, TONIC, ALTERATIVE.

R Each fluidounce contains:

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|-----------------------------|------|---------|
| Hypophosphite of Soda ..... | 2    | grains. |
| " Lime .....                | 1½   | "       |
| " Iron .....                | 1½   | "       |
| " Quinine .....             | ¾    | "       |
| " Manganese .....           | 1½   | "       |
| " Strychnine .....          | 1-16 | "       |

Dose: One to four fluidrachms.

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Being composed in part of ingredients of the original "CHURCHILL'S SYR. HYPOPHOSPHITES," and containing the excellent CONSTRUCTIVE TONICS and STIMULANTS, Iron, Quinine, Strychnine, Manganese, this combination is recognized by physicians as an excellent remedy in

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The various salts are in COMPLETE and PERMANENT solution. ACCURATE UNIFORMITY is secured by the utmost care in compounding this preparation.

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(Signed) COLEMAN ROGERS, M. D.

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Respectfully your obedient servant, (Signed) JAMES M. HOLLOWAY, M. D., No. 728 4th Av.

DR. CHAS. DENISON, Denver, Colorado, says: "*Your Hypophosphites has few equals.*"

DR. R. F. SEAY, Washington, Georgia, writes of our preparation: "*They are not only elegant and palatable, but give the best results.*"

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# ARISTOL.

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ARISTOL is insoluble in water and glycerine, and very sparingly in alcohol, but is very easily soluble in ether and chloroform. The ether solution is precipitated by the addition of alcohol. ARISTOL is very freely soluble in fatty oils. The solution must be made in the cold, by stirring, as the use of heat causes a decomposition. For the same reason it is necessary to protect the body from light and keep it in opaque bottles. It very readily adheres to the skin, and can thus be used as a powder strewn over wounds and burns.

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# RESTORATIVE WINE OF COCA

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**Prof. WM. A. HAMMOND, M. D., says:** A wineglassful of this tonic, taken when one is exhausted and worn out, acts as a most excellent restorative; it gives a feeling of rest and relief, and there is no reaction and no subsequent depression. A general feeling of pleasantness is the result. **I have discarded other wines of coca and use this alone.** It produces also excellent results in cases of depression of spirits; in hysteria, headache, and in nervous troubles generally it works admirably. It is a simple remedy, yet efficacious and remarkable in its results.

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**DOSE.**—For an adult, one table-spoonful three times a day, after eating; for seven or twelve years of age, one dessert-spoonful; from two to seven, one teaspoonful; for infants, from five to twenty drops, according to age.

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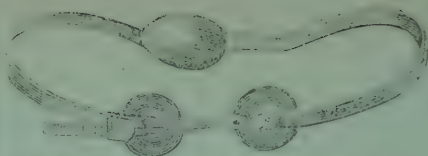
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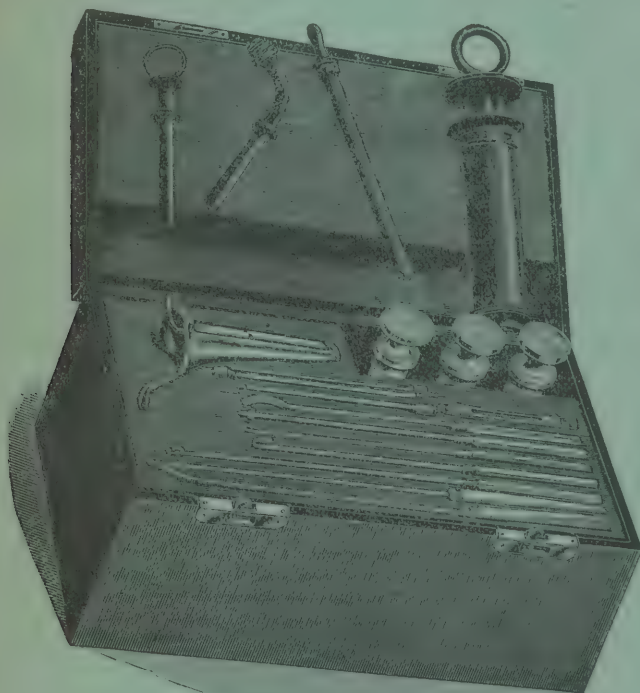
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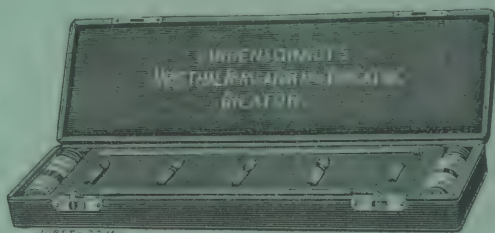
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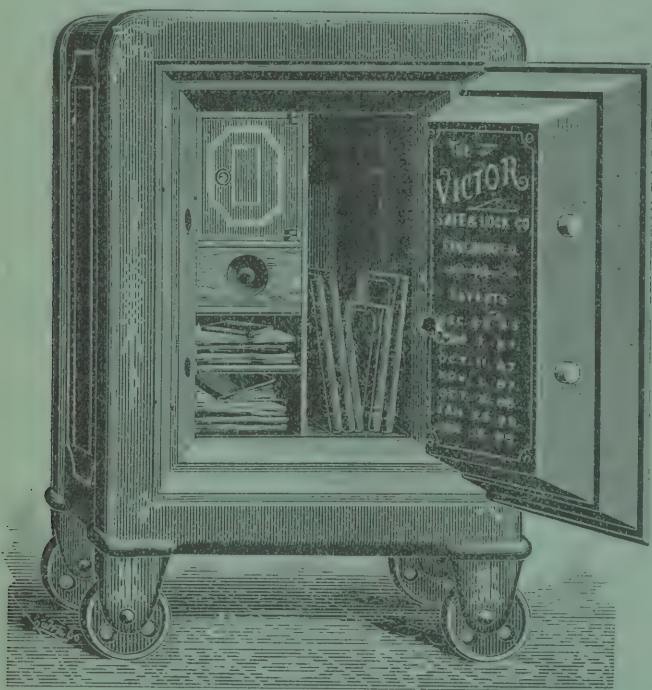
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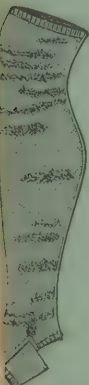


Fig. 1.

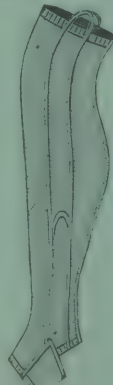


Fig. 2.



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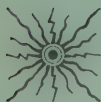
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Dr. Geo. B. Hope, Surgeon Metropolitan Throat Hospital, Professor Diseases of Throat, University of Vermont, writes in an article headed, "Some Clinical Features of Diphtheria, and the treatment by Peroxide of Hydrogen (*N. Y. Medical Record*, October 13, 1888). Extract:

" . . . On account of their poisonous or irritant nature the active germicides have a utility limited particularly to surface or open wound applications, and their free use in reaching diphtheritic formations in the mouth or throat, particularly in children, is, unfortunately, not within the range of systematic treatment. In Peroxide of Hydrogen, however, it is confidently believed will be found, if not a specific, at least the most efficient topical agent in destroying the contagious element and limiting the spread of its formation, and at the same time a remedy which may be employed in the most thorough manner without dread of producing any vicious constitutional effect. . . .

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Dr. E. R. Squibb, of Brooklyn, writes as follows in an article headed "On the Medical Uses of Hydrogen Peroxide (*Gaillard's Medical Journal*, March, 1889, p. 267), read before the Kings County Medical Association, February 5, 1889:

"Throughout the discussion upon diphtheria very little has been said of the use of the Peroxide of Hydrogen, or hydrogen dioxide; yet it is perhaps the most powerful of all disinfectants and antiseptics, acting both chemically and mechanically upon all excretions and secretions, so as to thoroughly change their character and reactions instantly. The few physicians who have used it in such diseases as diphtheria, scarlatina, small-pox, and upon all diseased surfaces, whether of skin or mucous membrane, have uniformly spoken well of it so far as this writer knows, and perhaps the reason why it is not more used is that it is so little known and its nature and action so little understood. . . .

"Now, if diphtheria be at first a local disease, and be auto-infectious; that is, if it be propagated to the general organism by a contagious virus located about the tonsils, and if this virus be, as it really is, an albuminoid substance, it may and will be destroyed by this agent upon a sufficient and a sufficiently repeated contact. . . .


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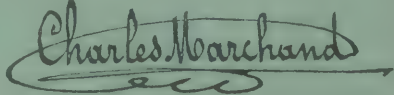
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*Extract from letter, W. F. Glenn, M. D., Professor of Genital-Urinary Diseases in the Medical Department of the University of Tennessee.*

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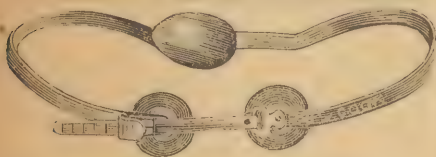
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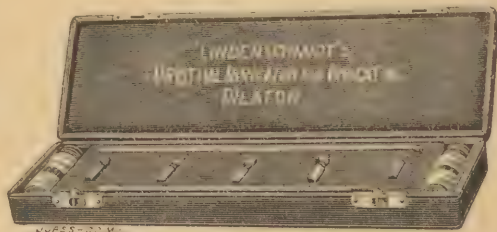
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Jno. B. Johnson, M., D., Professor of the Principles and Practice of Medicine, St. Louis Medical College.

ST. LOUIS, June 20, 1888.

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Respectfully,

*Chas. B. Johnson*

L. Ch. Boisligniere, Professor Obstetrics, St. Louis Medical College.

ST. LOUIS, June 18, 1888.

I have given DIOVIBURNIA a fair trial and found it useful as an uterine tonic and antispasmodic, relieving the pains of dysmenorrhœa, and regulator of the uterine functions. I feel authorized to give this recommendation of DIOVIBURNIA, as it is neither a patented nor a secret medicine, the formula of which having been communicated freely to the medical profession.

*L. Ch. Boisligniere M.D.*

H. Tuholski, M. D., Professor Clinical Surgery and surgical Pathology, Missouri Medical College, also Post-Graduate School of St. Louis  
ST. LOUIS, June 23, 1888.

I have used DIOVIBURNIA quite a number of times—sufficiently frequently to satisfy myself of its merits. It is of unquestionable benefit in painful dysmenorrhœa; it possesses antispasmodic properties which seem especially to be exerted on the uterus.

*H. Tuholski*

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Fig. 1.



Fig. 2

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### OPINION OF THE PROFESSION.

Dr. Geo. B. Hope, Surgeon Metropolitan Throat Hospital, Professor Diseases of Throat, University of Vermont, writes in an article headed, "Some Clinical Features of Diphtheria, and the treatment by Peroxide of Hydrogen (*N. Y. Medical Record*, October 13, 1888). Extract:

"On account of their poisonous or irritant nature the active germicides have a utility limited particularly to surface or open wound applications, and their free use in reaching diphtheritic formations in the mouth or throat, particularly in children, is, unfortunately, not within the range of systematic treatment. In Peroxide of Hydrogen, however, it is confidently believed will be found, if not a specific, at least the most efficient topical agent in destroying the contagious element and limiting the spread of its formation, and at the same time a remedy which may be employed in the most thorough manner without dread of producing any vicious constitutional effect."

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Dr. E. R. Squibb, of Brooklyn, writes as follows in an article headed "On the Medical Uses of Hydrogen Peroxide (*Gaillard's Medical Journal*, March, 1889, p. 267), read before the Kings County Medical Association, February 5, 1889:

"Throughout the discussion upon diphtheria very little has been said of the use of the Peroxide of Hydrogen, or hydrogen dioxide; yet it is perhaps the most powerful of all disinfectants and antiseptics, acting both chemically and mechanically upon all excretions and secretions, so as to thoroughly change their character and reactions instantly. The few physicians who have used it in such diseases as diphtheria, scarlatina, small-pox, and upon all diseased surfaces, whether of skin or mucous membrane, have uniformly spoken well of it so far as this writer knows, and perhaps the reason why it is not more used is that it is so little known and its nature and action so little understood."

"Now, if diphtheria be at first a local disease, and be auto-infectious; that is, if it be propagated to the general organism by a contagious virus located about the tonsils, and if this virus be, as it really is, an albuminoid substance, it may and will be destroyed by this agent upon a sufficient and a sufficiently repeated contact."

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Syrup of Figs is delightful to the taste and may be taken by every one from infancy to old age.

Syrup of Figs does not debilitate and is perfectly safe.

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Prescribed and endorsed by the leading physicians of the United States. It is giving universal satisfaction in the profession. It seems to be ALMOST A SPECIFIC for Diseases of the Genito-Urinary Organs.

*Extract from letter, W. F. Glenn, M. D., Professor of Genital-Urinary Diseases in the Medical Department of the University of Tennessee.*

No practitioner passes many days, or seldom many hours, without being called upon to prescribe for some real or imaginary disease of the kidneys. While such serious disorders as diabetes and Bright's disease, in which these organs are fatally involved, are occasionally met with, they are few as compared with the many minor affections, not only in the kidneys themselves, but on all parts of the genito-urinary tract. Catarrh of the kidneys, ureter, bladder or urethra, irritations and congestions of the various parts of the urinary apparatus, are as common as bad colds. What is more frequent than patients complaining of pain in the back, in the region of the kidneys, with or without a scant flow of urine, or a burning sensation in the neck of the bladder or urethra on voiding urine, and numbers of other similar ailments. In all forms of functional derangements of these important excretory organs the administration of a gentle but effective diuretic generally affords relief. Where an analysis of urine proves the absence of elements that would indicate serious organic lesions it is a safe, and in fact, a proper course to use a remedy that will stimulate to gentle action the cells of the kidneys, thereby increasing the watery portions of the urine. Such a course will rarely fail to effect a cure.

For this purpose there is nothing superior to buchu, juniper, acetate of potash, corn silk and digitalis. The action of many of this class of remedies, such as corn silk, juniper, eucalyptus, etc., have a more or less specific influence on bladder and urethral irritations and inflammations.

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*Extract from letter Dr Theo. Jasper, 322 South Sixth street, Columbus, Ohio.*

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J. LINDSAY PORTEOUS,

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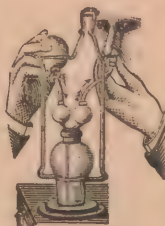
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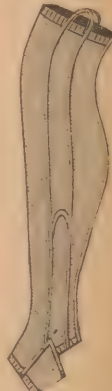


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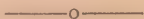
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### OPINION OF THE PROFESSION.

Dr. Geo. B. Hope, Surgeon Metropolitan Throat Hospital, Professor Diseases of Throat, University of Vermont, writes in an article headed, "Some Clinical Features of Diphtheria, and the treatment by Peroxide of Hydrogen (*N. Y. Medical Record*, October 13, 1888). Extract:

"On account of their poisonous or irritant nature the active germicides have a utility limited particularly to surface or open wound applications, and their free use in reaching diphtheritic formations in the mouth or throat, particularly in children, is, unfortunately, not within the range of systematic treatment. In Peroxide of Hydrogen, however, it is confidently believed will be found, if not a specific, at least the most efficient topical agent in destroying the contagious element and limiting the spread of its formation, and at the same time a remedy which may be employed in the most thorough manner without dread of producing any vicious constitutional effect.

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Dr. E. R. Squibb, of Brooklyn, writes as follows in an article headed "On the Medical Uses of Hydrogen Peroxide (*Gaillard's Medical Journal*, March, 1889, p. 267), read before the Kings County Medical Association, February 5, 1889:

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"Now, if diphtheria be at first a local disease, and be auto-infectious; that is, if it be propagated to the general organism by a contagious virus located about the tonsils, and if this virus be, as it really is, an albuminoid substance, it may and will be destroyed by this agent upon a sufficient and a sufficiently repeated contact.

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